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0003

C/007/022 Incoming
CC: Dave

COPY

SAVAGE
Savage Services Corporation
Coal & Power Services Group
2025 East 5000 South
Box 1001
Price, UT 84501

(435) 637-5664
Fax (435) 637-3418

Daron Haddock
Coal Program Manager
Utah Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801

Re: Submittal of Savage Coal Terminal MRP
Technical Analysis Response
ACT/007/022
Carbon County, Utah

Dear Daron:

Enclosed are 2 copies of the Savage Coal Terminal Technical Analysis Response.

A C_1/C_2 Form and a Checklist are also provided. If you need any additional information, please let me know.

Sincerely,

Dan W. Guy

Dan W. Guy
for
Boyd Rhodes,
Manager

File in:
C/007/022 2009 Incoming
Refer to:
☐ Confidential
☐ Shelf
☒ Expandable
Date 022609 For additional information

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MAR 02 2009
DIV. OF OIL, GAS & MINING

cc: Boyd Rhodes - Savage

File

Form DOGM - C1 (Last Revised February 19, 2009)

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File Folder # 3

APPLICATION FOR PERMIT PROCESSING

Permit Change X	New Permit ☐	Renewal ☐	Transfer ☐	Exploration ☐	Bond Release ☐	Permit Number: C/007/022
Title of Proposal:						Mine: Savage Coal Terminal
Technical Analysis Response						Permittee: Savage Industries

Description, include reason for application and timing required to implement:

Instructions: *If you answer yes to any of the first 8 questions (gray), submit the application to the Salt Lake Office. Otherwise, you may submit it to your reclamation*

☐ Yes	X No	1. Change in the size of the Permit Area? ____ acres Disturbed Area? ____ acres ☐ increase ☐ decrease.
☐ Yes	X No	2. Is the application submitted as a result of a Division Order? DO #
☐ Yes	X No	3. Does application include operations outside a previously identified Cumulative Hydrologic Impact Area?
☐ Yes	X No	4. Does application include operations in hydrologic basins other than as currently approved?
☐ Yes	X No	5. Does application result from cancellation, reduction or increase of insurance or reclamation bond?
☐ Yes	X No	6. Does the application require or include public notice/publication?
☐ Yes	X No	7. Does the application require or include ownership, control, right-of-entry, or compliance information?
☐ Yes	X No	8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
☐ Yes	X No	9. Is the application submitted as a result of a Violation? NOV #
X Yes	☐ No	10. Is the application submitted as a result of other laws or regulations or policies? Explain: Request by Division. Technical Analysis
☐ Yes	X No	11. Does the application affect the surface landowner or change the post mining land use?
☐ Yes	X No	12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2?)
☐ Yes	X No	13. Does the application require or include collection and reporting of any baseline information?
☐ Yes	X No	14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
☐ Yes	X No	15. Does application require or include soil removal, storage or placement?
☐ Yes	X No	16. Does the application require or include vegetation monitoring, removal or revegetation activities?
☐ Yes	X No	17. Does the application require or include construction, modification, or removal of surface facilities?
☐ Yes	X No	18. Does the application require or include water monitoring, sediment or drainage control measures?
☐ Yes	X No	19. Does the application require or include certified designs, maps, or calculations?
☐ Yes	X No	20. Does the application require or include subsidence control or monitoring?
☐ Yes	X No	21. Have reclamation costs for bonding been provided for?
☐ Yes	X No	22. Does application involve a perennial stream, a stream buffer zone or discharges to a stream?
☐ Yes	X No	23. Does the application affect permits issued by other agencies or permits issued to other entities?

X Attach 2 complete copies of the application.

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

Signed - Name - Position - Date: for Boyd Rhodes, Mgr. 2/26/09

Subscribed and sworn to before me this 26 day of Feb 2009.

Notary Public

My Commission Expires: 3-7 2009

Attest: STATE OF UTAH
COUNTY OF CARBON

TAMI L WARDLE
NOTARY PUBLIC • STATE of UTAH
1323 SOUTH 600 WEST
PRICE UT 84501
MY COMMISSION EXPIRES: 03-07-2010

Received by Oil, Gas & Mining

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ASSIGNED TRACKING NUMBER

Application for Permit Processing
Detailed Schedule of Changes to the MRP

COPY

Title of Application:	Permit Number: C/007/022
Technical Analysis Response	Mine: Savage Coal Terminal
	Permittee: Savage Industries

Provide a detailed listing of all changes to the mining and reclamation plan which will be required as a result of this proposed
permit application. Individually list all maps and drawings which are to be added, replaced, or removed from the plan. Include changes of the table of contents, section of the plan, pages, or other information as needed to specifically locate, identify and revise the existing mining and reclamation plan. **Include page, section and drawing numbers as part of the description.**

			DESCRIPTION OF MAP, TEXT, OR MATERIALS TO BE CHANGED
☐ ADD	X REPLACE	☐ REMOVE	Table of Contents - All
☐ ADD	X REPLACE	☐ REMOVE	Chapter 1 - All
☐ ADD	X REPLACE	☐ REMOVE	Appendix 1-2
☐ ADD	X REPLACE	☐ REMOVE	Appendix 1-3
☐ ADD	X REPLACE	☐ REMOVE	Appendix 1-4
☐ ADD	X REPLACE	☐ REMOVE	Appendix 1-5
☐ ADD	X REPLACE	☐ REMOVE	Plate 1-1
☐ ADD	X REPLACE	☐ REMOVE	Chapter 2 - Table of Contents, Page 29 and 30
X ADD	☐ REPLACE	☐ REMOVE	Plate 2-4
☐ ADD	X REPLACE	☐ REMOVE	Chapter 3 - Pages 16, 17, 18 and 19
☐ ADD	X REPLACE	☐ REMOVE	Chapter 5 - All
X ADD	☐ REPLACE	☐ REMOVE	Appendix 5-1 - Add Refuse Pile Analysis to Attachment 1
X ADD	☐ REPLACE	X REMOVE	Appendix 5-2 - Add NOTE: Page to Attachment 1 and Remove Horizon Lab Analysis (3 pages)
☐ ADD	X REPLACE	☐ REMOVE	Plate 5-4
☐ ADD	X REPLACE	☐ REMOVE	Chapter 7 - Table of Contents (Plate Page)
X ADD	☐ REPLACE	☐ REMOVE	Plate 7-7
☐ ADD	X REPLACE	☐ REMOVE	Appendix 8-3 - Replace Liability Insurance Certificate
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	

Any other specific or special instructions required for insertion of this proposal into the Mining and Reclamation Plan?

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Checklist for
Technical Analysis Response
Savage Coal Terminal

Deficiency	Response Location	
R645-300-141 Added legal description to section.	Section 116.100	Page 11
R645-301-112.200 Numbers in MRP are correct.	Section 112.200	Page 1
R645-301-112.230 Added requested information.	Section 112.230	Page 1
R645-301-112.330 Added officers & directors for both companies.	Section 112.310	Pages 2, 3, and 4
R645-301-112.340 Removed - N/A; No other permits (Catale over 5 years.)	Section 112.340	Page 5
R645-301-112.600 Table 1-1 Updated with Surface and Mineral Ownership.		Table 1-1, Plate 1-1
R645-301-112.700 Note and revised Appendix 1-2 to show temporary refuse was terminated.	Section 112.700	Page 5; App 1-2
R645-301-114 & 121.200 Added clarification of ownership. Also shown in Appendix 1-5.	Section 114	Page 7; App 1-5
R645-301-114.100 Clarifies sequence of ownership and recording locations.	Section 114; 114.100;	Page 7, App 1-5
R645-301-117.100 Updated Liability Insurance Certificate.		Appendix 8-3
R645-301-117.200 Affidavit of Publication with Public Notice.		Appendix 1-3
R645-301-123 Changed to Appendix 1-4 and updated.		Appendix 1-4

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R645-301-140

Old Wildlife Map is not relevant. All pertinent wildlife information is found in the text.

R645-301-230	Section 231.400	Page 32
R645-301-222 & 121.200	Section 231.100	Page 29; New Pl. 2-4
R645-301-244, 354 & 355	Section 542.200	Pages 50 & 51
R645-301-322, 333, 342 & 358	Section 322	Page 16
R645-301-412 - 414, 302.270-275	Section 333	Page 17
R645-301-521.190	Section 521.190	Page 30
R645-301-526.100	Section 526.100 through 526.114; Page 32	
R645-301-527.100	Section 511.100;	Page 6, Plate 5-4
R645-301-521.252	Section 521.252	Page 31
R645-301-521.270	Section 521.270	Page 31
R645-301-731.300	Attachment 1, Appendix 5-1; Attachment 1, Appendix 5-2	
R645-301-622.400		New Plate 7-7

Savage Services Corporation
Savage Coal Terminal
C/007/022

Chapter 1

General Contents

R645-301-100

Table of Contents
Savage Coal Terminal
Chapter 1 - General Contents

R645. Natural Resources; Oil, Gas and Mining; Coal.

R645-301. Coal Mine Permitting: Permit Application Requirements.

R645-301-100. General Contents.

112. Identification of Interests.

112.100. The applicant is a Utah Corporation.

112.210. The permit applicant name, address, telephone number and employer I. D. Number is:

Savage Services Corporation
6340 South 3000 East, Suite 600
Salt Lake City, Utah 84121
(801) 944-6600
Employer I.D. #87-0237425

112.220. The applicant's resident agent is:

C. T. Corporation Systems
50 West Broadway
Salt Lake City, Utah 84101
(801) 441-9820

112.230. The abandoned mine land reclamation fee will be paid by Savage Services Corporation.

Savage Services Corporation
6340 South 3000 East, Suite 600
Salt Lake City, Utah 84121
(801) 944-6600
Employer I.D. #87-0237425

112.300. All stock is owned by:

Savage Companies
6340 South 3000 East, Suite 600
Salt Lake City, Utah 84121
(A Utah Corporation)
Employer I.D. #87-0387049

112.310. Officers and Directors of the Applicant.

The names and addresses of every officer, partner, director, or other person performing a function similar to a director of the applicant:

SAVAGE SERVICES CORPORATION

Corporation: Savage Services Corporation
Type of Entity: Utah Corporation
Date of Formation: June 22, 1959

Shareholder: Savage Companies

Officers and Directors for Savage Services Corporation:

Directors:		Date:
Allen B. Alexander	Chairman	05/15/78
Neal Savage	Vice Chairman	06/22/59
John K. Savage	Director	01/01/70
H. Benson Lewis	Director	08/01/85

Officers:		Date:
Allen B. Alexander	President and CEO	05/15/78
H. Benson Lewis	Exec. VP and Vice Chairman	08/01/85
David G. Wolach	Exec. VP	04/29/87
Todd L. Savage	Exec. VP	09/23/76
Kelly J. Flint	Sr. VP, Gen. Counsel, Secretary	01/01/03
Curtis C. Dowd	Sr. Vice President, CFO	08/30/04
Gary L. Plant	Sr. Vice President	02/20/04
C. Fred Busch	Sr. Vice President	01/16/85
Howard F. Goodman	Sr. Vice President	05/01/84
John K. Savage	Sr. Vice President	01/01/70
Donald W. Alexander	Sr. Vice President	02/01/83
Kim F. Christensen	Sr. Vice President	04/30/86
Charles O. Monroe	Sr. Vice President	06/23/94
Kenneth W. Cooper	Sr. Vice President	10/28/85
Kenneth D. Ellzey	Sr. Vice President	09/01/88
Eric B. Adamson	Sr. Vice President	05/10/76
Nathan N. Savage	Sr. Vice President	06/02/86
Jeff M. Chesler	Sr. Vice President	01/02/91
Terrence Savage	Sr. Vice President	06/02/80
M. Troy Savage	Sr. Vice President	06/05/85
Jack M. Cohn	Sr. Vice President	07/17/89
Ellis Edwards	Sr. Vice President	11/24/75

Raymond Alt	Sr. Vice President	07/31/73
Boyd E. Draper	Sr. Vice President	01/18/82
Troy Reid	Vice President	06/15/91
Mark Wehmanen	Vice President	01/15/96
Tad A. Kock	Vice President	09/16/86
David L. Harris	Vice President	08/04/99
Jose L. Fernandez	Vice President	09/19/94
Jerry Evenson	Vice President	01/16/98
C. Scott Smith	Vice President	08/01/97
Debbie Rhodes	Vice President	09/08/83
Brad Crist	Vice President	03/11/02
Gerald Farrell	Vice President	10/01/06
Carin Crowe	Vice President	08/26/02
Rob Davidson	Vice President	06/07/88
Sharon Broadwater	Vice President	10/30/06
Jason Ray	Vice President	05/01/05
Mike Miller	Vice President	08/20/01
Kent Avery	Vice President	04/23/08
Amy Poulson	Assistant Secretary	12/01/07

SAVAGE COMPANIES

Type of Entity: Utah Corporation
Date of Formation: October 2, 1970

Shareholders:

Class A (voting):

LaRae T. Savage Q-Tip Marital Trust	
Neal Savage	06/01/57
Estate of Luke Savage	06/01/57

Class C (voting):

Allen B. Alexander	33.3%	05/15/78
H. Benson Lewis	33.3%	08/01/85
James T. Jensen	33.3%	07/01/90

Officers and Directors for Savage Companies:

Directors:		Date:
Allen B. Alexander	Chairman	05/15/78
Neal Savage	Vice Chairman	06/22/59
H. Benson Lewis	Vice Chairman	08/01/85
James T. Jensen	Director	07/01/90

David G. Wolach	Director	04/29/87
Todd L. Savage	Director	09/23/76
John K. Savage	Director	01/01/70
Howard F. Goodman	Director	05/01/84
Donald W. Alexander	Director	02/01/83
Nathan N. Savage	Director	06/02/86

Officers:		Date:
Allen B. Alexander	President and CEO	05/15/78
H. Benson Lewis	Exec. VP and Vice Chairman	08/01/85
David G. Wolach	Exec. VP	04/29/87
Todd L. Savage	Exec. VP	09/23/76
Donald W. Alexander	Sr. Vice President	02/01/83
John K. Savage	Sr. Vice President	01/01/70
Kelly J. Flint	Sr. VP, Gen. Counsel, Secretary	01/01/03
Howard F. Goodman	Sr. Vice President	05/01/94
Curtis C. Dowd	Sr. Vice President, CFO	08/30/04
Nathan N. Savage	Sr. Vice President	06/02/86
Tad A. Koch	Vice President	09/16/86
David L. Harris	Vice President and Controller	08/04/99
C. Scott Smith	Vice President	08/01/97
Sharon Broadwater	Vice President	10/30/06
Amy Poulson	Assistant Secretary	12/01/07

Previous officers and end dates:	
Isaac Haboucha	05/08/08
Butch Jentzsch	12/31/07
Kevin R. Haugh	02/01/08
Mark Andrew Nelson	02/15/06

112.320. All stock is owned by The Savage Companies (see Section 112.300).

112.330. See Section 112.310.

112.340. N/A - None.

112.350. N/A - There are no other coal mine operation permits in the name of Savage Services Corporation.

112.400. (See Section 112.340)

112.500. The owner of the surface and coal is:

Savage Services Corporation
6340 South 3000 East, Suite 600
Salt Lake City, Utah 84121

112.600. See Plate 1-1 for owners of record, and Table 1-1 for details and addresses.

112.700. The MSHA numbers for all mine-associated structures are:

Mine Name: Savage Coal Terminal.
MSHA I.D. # 42-01444
(See also Appendix 1-2 for MSHA Refuse Pile Numbers).

Please note the appendix 1-2 shows 2 refuse permits. The temporary permit was terminated on 3/19/81. The permanent permit was reassigned a new MSHA ID# on 08/10/00.

112.800. N/A - None.

112.900. When notified the application is approved, but before the permit is issued, the applicant shall, as applicable, update, correct or indicate that no change has occurred in the information previously submitted under R645-301-112.100 through R645-301-112.800.

113. Violation Information

113.110. The applicant has not had a federal or state permit to conduct coal mining and reclamation operations suspended or revoked in the last 5 years.

113.120. The applicant has not forfeited a performance bond or similar security deposited in lieu of bond.

113.200. N/A

113.300. A list of all notices of violation received by the applicant in the past 3 years for violations pertaining to air or water environmental protection is included in Appendix 1-1.

113.310. See Appendix 1-1.

113.320. See Appendix 1-1.

113.330. See Appendix 1-1.

113.340. See Appendix 1-1.

113.350. See Appendix 1-1.

113.400. After the applicant is notified that the application is approved, but before the permit is issued, the applicant shall, as applicable, update, correct or indicate that no change has occurred in the information previously submitted under R645-301-113.

114. Right of Entry Information.

General:

Utah Power & Light originally leased the site for coal loading operations because of its proximity to the Denver and Rio Grande Western (D&RGW) railroad siding. Swisher Coal Company purchased the SW ½ of Section 11 for the purpose of developing a preparation and loadout facility for unit coal trains. Original UP&L disturbance occurred in 1975. Expansion activities by Swisher Coal Company were conducted between October 1977 and April 1978. The site was purchased by ARCO Coal (Atlantic Richfield Co.) In 1980. The local company name was changed from Swisher Coal Company to Beaver Creek Coal Company. The Utah and Colorado coal operations (including Beaver Creek Coal Co.) were placed under a subsidiary company of ARCO Coal, known as Mountain Coal Co. The coal terminal was sold to Savage Industries, Inc. (now Savage Services Corporation) in 1995, by the parent company of Beaver Creek Coal - Mountain Coal Company. The facility name formerly Castle Valley Spur or C.V. Spur was then changed to Savage Coal Terminal, in 1999.

114.100. A description of the documents upon which the applicant bases its legal right to enter and begin underground coal activities in the permit area and whether the rights are the subject of pending litigation.

Documents Establishing Legal Right to Enter

It should be noted that wherever right-of-entry documents name Swisher Coal Company or Beaver Creek Coal Company, these documents have been transferred and filed with the County Recorder in the name of Savage Services Corporation.

Plate 1-1 shows the boundaries of lands within the proposed permit area upon which the applicant has the legal right to enter and conduct coal operations. The documents which give applicant the legal right to enter, commence and maintain coal preparation and load-out activities in the permit area are as follows:

1. Special Warranty Deed dated November 11, 1977 from Utah Power & Light Company, grantor, to Swisher Coal Company (later Beaver Creek Coal Company), grantee, covering all the surface and part of the minerals of the following described lands:

   Township 15 South, Range 10 East, SLBM

   Section 11: SW 1/4, expecting therefrom the most Easterly 100 feet thereof.

2. Lease, granted for the purposes of railroad trackage and coal loading facilities, dated January 15, 1981, from The Denver and Rio Grande Western Railroad Company, lessor, to Beaver Creek Coal Company, lessee, covering the surface of the following described lands:

   Township 15 South, Range 10 East, SLBM

   A rectangle tract of lessor's land near Price, Utah, being the Westerly 42.5 feet of lessor's right-of-way from Engr. Sta. 91 plus 70 to Engr. Sta. 132 plus 70 of lessor's Castle Valley Spur.

3. Trackage agreement, dated January 22, 1974, between The Denver and Rio Grande Western Railroad and Utah Power & Light Company providing for construction and operation of trackage between Station 90 + 20 and Station 134 + 20 off the main track of Castle Valley Spur. With the consent of The Denver and Rio Grande Western Railroad Company, said agreement was assigned to Swisher Coal Company (later Beaver Creek Coal Company) on February 27, 1978.

4. Letter agreement, dated January 17, 1978, between R. D. & Peggy Campbell and Swisher Coal Co. (later Beaver Creek Coal Company) wherein Campbells grant a 20-foot right-of-way for water pipelines over and across their land in Sections 2 and 11, Township 15 South, Range 10 East, between the Price River and Beaver Creek Coal Company's coal preparation and loadout facilities in the SW ¼ of Section 11, Township 15 South, Range 10 East.

5. Right-Of-Way Agreement, dated January 1, 1978, between David and Mildred Cave and Judson D. and Cherie Critchlow, grantors, and Swisher Coal Co. (later Beaver Creek Coal Company), grantee wherein Cave and Critchlow grant a 20-foot right-of-way for water pipelines over and across their property in Section 2, Township 15 South, Range 10 East, together with the right to build a pumphouse thereon.

6. Approved Change of Diversion Application No. 1308, covering 357 acre-feet of water for industrial use in the coal preparation plant.

7. Lease Agreement with Option to Purchase between Mountain Coal Company and Savage Industries, Inc. September 9, 1994. Site purchased December 9, 1997 by Savage Industries, Inc. (See Appendix 1-5).

8. Name change from Savage Industries, Inc. to Savage Service Corporation, June 22, 2003, filed with the Department of Commerce.

Pending Litigation:
None.

Surface Mining Rights:
The surface operations associated with coal processing and loadout activities do not involve the surface mining of coal. No private coal mineral estate is to be severed from the property during the term of this permit.

114.200. N/A - This is a coal processing and loadout facility. There are no plans for mining of coal.

114.300. Nothing given under R645-301-114.100 through R645-301-114.200 will be construed to provide the Division with the authority to adjudicate property rights disputes.

115. Status of Unsuitability Claims.

115.100. Areas Designated Unsuitable for Mining

The proposed permit area is not within an area designated unsuitable for the surface effects of underground coal mine activities under the R645 regulations. Neither is the proposed permit area under study for designation in an administrative proceeding initiated under renewable resource lands and would not result in substantial losses of food fiber, or water supply. The permit area contains no prime farmland or merchandisable timber. Mining would not affect natural hazard lands and thereby endanger life and property. It contains no cemeteries, no national trails, no wild and scenic rivers, no wilderness or wilderness study areas, and no sufficient harvestable forest cover.

115.200. Exemption

The applicant does not claim exemption.

115.300. Dwellings

There are no occupied dwellings within ¼ mile of the proposed permit area.

The operations are within 100' of a public road which provides access to the site.

This has been approved under the existing permit.

116. Permit Term

116.100. Surface Acres Affected

The number of surface acres to be disturbed by the operation is 153.46 acres. There are no plans for additional surface disturbance for this operation at this time.

The permit area is described as follows:

Township 15 South, Range 10 East, Salt Lake Base & Meridian.

Section 11: W1/2 SW1/4 except 0.24 ac. in the NW corner and 5.42 ac. in the SW corner;
E1/2 SW1/4 except East 100'.

Also included in the permit area is a 20' Right-of-Way for a pipeline across the SE¼ NW¼ and NW¼ NW¼ of Section 11 (1.21 acres), and across the SW¼ SW¼, NW¼ SW¼, SW¼ NW¼ and NE¼ NW¼ of Section 2 (3.97 acres). This area is located on the "Price Quadrangle", U.S. Geological Survey 7.5 minute map.

Horizontal Extent of Underground Workings - N/A

All 153.46 acres of the permit area may be affected by surface activities.

Vertical Extent of Workings - N/A

This permit will be for a period of 5 years. The permit is expected to be renewed at 5-year intervals throughout the life of the property.

116.200. N/A - The initial permit term is not requested for more than 5 years.

117. Insurance, Proof of Publication and Facilities or Structures Used in Common.

117.100. A Certificate of Liability Insurance is included in Chapter 8, Appendix 8-3.

117.200. A copy of the newspaper advertisement for renewal of this permit is included in Appendix 1-3.

117.300. N/A

118. Filing Fee.

A filing fee of $5.00 has been submitted to the Division with this application.

120. Permit Application Format and Contents.

121. The Permit Application:

121.100. The permit application contains current information.

121.200. The permit application is intended to be clear and concise.

121.300. This application is filed in the format required by the Division.

122. All reference materials used in this application have been provided in the permit, or are readily available to the division.

123. A notarized statement is included in Appendix 1-5.

130. Reporting of Technical Data

131. All technical data submitted in the permit application is accompanied by the names of persons or organizations that collected and analyzed the data, dates of collection and analysis of the data, and descriptions of the methodology used to collect and analyze the data.

132. Technical analyses will be planned by or under the direction of a professional qualified in the subject to be analyzed.

140. Maps and Plans

141. Maps have been submitted in a consolidated format and per regulation.

142. Maps are included to show both operation and reclamation phases. In addition, Plate 5-1 shows areas of the site disturbed prior to August 3, 1977, after August 3, 1977 and prior to May 3, 1978, after May 3, 1978 and prior to approval of the State Program and after issuance of the Permit.142.100 Prior to August 3, 1977;

142.200. See Plate 5-1.

142.210. See Plate 5-1.

142.220. N/A - There have been no small operator's exemptions.

142.300. See Plate 5-1.

142.400. See Plate 5-1.

150. Completeness

This is a reformatted permit application submitted for renewal of an existing approved permit. This application is intended to address each of the R645-301 regulations for completeness and technical adequacy.

TABLE 1-1
RECORD HOLDERS OF LEGAL INTERESTS
SURFACE OWNERSHIP

Surface Owner:	Address:
Savage Services Corporation	6340 South 3000 East, Suite 600 Salt Lake City, Utah 84121
Agnes K. Pierce	735 North 700 East Price, Utah 84501
UPC Inc.	53 West Angelo Avenue Salt Lake City, Utah 84115
John Brown	53 West Angelo Avenue Salt Lake City, Utah 84115
Circle K Ranch	P.O. Box 700 Price, Utah 84501
John L. & Christy L. Hanna	1830 East 5000 South Price, Utah 84501
Kevin Ray & Lois W. Jensen	P.O. Box 219 Cleveland, Utah 84518
David C. Swenson	2269 N. Hillcrest Drive Wellington, Utah 84542
High Country Forest Products	8243 Old Federal Road Montgomery, AL 36117
David R. Cave	1220 South 530 West Price, Utah 84501
Roy D. & Peggy L. Campbell	P.O. Box 269 Wellington, Ut 84542
Alan Walton	3212 South State Street Salt Lake City, Utah 84115
E. W. Stoddard	P.O. Box 65644 Salt Lake City, Utah 84165
E. W. Stoddard	53 West Angelo Ave Salt Lake City, Utah 84115
Denver & Rio Grande Western Union Pacific Railroad Company	1400 Douglas - Stop 1640 Omaha, NE 68179
2 C's Properties, LLC.	1865 West Ridge Road Wellington, Utah 84542

TABLE 1-1
RECORD HOLDERS OF LEGAL INTERESTS
MINERAL OWNERSHIP

Mineral Owner:	Address:
John C. & Sophia Critchlow	Rout 1, Box 331 Price, Utah 84501
Olga Downard	223 South 5th East Price, Utah 84501
Ervin & Violet Feichko	Route 1 Helper, Utah 84526
Geraldine Thomas & Eldred E. Pierce, Jr.	6715 Lederer Street Canoga Park, California 91300
Kent E. & Clara W. Peterson	Unknown Salt Lake City, Utah 84101
Price City	City Hall, 185 East Main Street Price, Utah 84501
G.W. Waterman	Route 1 Box 113 Price, Utah 84501
State of Utah Division of State Lands	675 East 500 South, Suite 500 Salt Lake City, Utah 84102
Jack & Frank World	760 North 5th East Price, Utah 84501
Mountain Coal Company	P.O. Box 591 Somerset, Colorado 81434
Denver & Rio Grande Western Union Pacific Railroad Company	1400 Douglas - Stop 1640 Omaha, NE 68179
USA	203 State Capital Building Salt Lake City, Utah 84114
KDS Commercial Property, LLC. Kent Shiner	P.O. Box 973 Price, Utah 84501

See Plate 1-1 for Surface & Mineral Ownership Map.

00063249 Bk00399 Pg00609-00609

ANN B. O'BRIEN-COUNTY OF CARBON
1997 DEC 09 15:49 PM FEE $12.00 BY
REQUEST: PROFESSIONAL TITLE SERVICES

SPECIAL WARRANTY DEED

For Ten Dollars ($10.00) and other good and valuable consideration, MOUNTAIN COAL COMPANY, a Delaware corporation, successor to Beaver Creek Coal Company, and successor to Swisher Coal Company, whose address is 555 17th Street, Denver, Colorado 80202, hereby conveys and warrants against all claiming by, through, or under it, to SAVAGE INDUSTRIES INC., a Utah corporation whose address is 5250 South 300 West, Suite 200, Salt Lake City, Utah 84107 the following described tract of land:

The Southwest Quarter of Section 11, Township 15 South, Range 10 East, Salt Lake Base and Meridian.

Situate in Carbon County, State of Utah.

EXCEPTING the most Easterly 100 feet thereof.

ALSO EXCEPTING the following: BEGINNING at a point 227.59 feet North and 269.61 feet East of the Southwest Corner of said Section 11, and running thence North 45°39' 45" East 69.47 feet; thence North 58°29'30" East 372.17 feet; thence South 68°31' 00" East 516.41 feet; thence South 280.99 feet, more or less, to the South boundary of said Section 11; thence South 89°58' 22" West 342.25 feet along the South boundary of said Section 11; thence North 49°17' 10" West 225.38 feet; thence North 76°30'50" West 343.93 feet, more or less, to the point of beginning.

ALSO EXCEPTING the following: BEGINNING at the West Quarter Corner of said Section 11, and running thence East 200.00 feet; thence Southwesterly along the arc of a 225 feet radius curve 306.3 feet, more or less, to a point 200.00 feet South of the point of beginning, thence North 200.00 feet to the point of beginning.

EXCEPTING therefrom all oil and gas in the West one-Half of said Southwest Quarter, with the right to prospect for, mine and remove the same.

EXCEPTING therefrom all oil, gas and other minerals in the East One-Half of said Southwest Quarter, with the right to prospect for, mine and remove the same.

Dated: December 4, 1997.

MOUNTAIN COAL COMPANY,
a Delaware corporation

By: Gene E. DiClaudio
Gene E. DiClaudio

PTS 9941

RECORDED AT THE REQUEST OF
PROFESSIONAL TITLE SERVICES

STATE OF COLORADO)
) ss.
COUNTY OF Delta)

The foregoing instrument was acknowledged before me this 4th day of December, 1997 by Gene E. DiClaudio, the President of MOUNTAIN COAL COMPANY, a Delaware corporation.

JEAN MORRIS NOTARY PUBLIC COLORADO

F. JEAN MORRIS
NOTARY PUBLIC
STATE OF COLORADO
My Commission Expires 03/26/2000

F. Jean Morris
Notary Public

609

Appendix 1-2

Other Licenses and Permits

Savage Services Corporation
Savage Coal Terminal

Appendix 1-2
Permits and Licenses Needed to Operate Savage Coal Terminal

Type of Permit/License	Permit License Issuing Authority	Application Number	Status
Construction Approval	Utah Division of Health 288 N. 1460 W. Salt Lake City, Utah 84116-0690	N/A	Approved 07/21/77
Building Permit	Carbon County County Courthouse Price, Utah 84501	No. 979	Issued 10/06/77
Refuse Fill Permit	State of Utah Division of Oil, Gas & Mining 355 W. North Temple Salt Lake City, Utah 84180-1203	N/A	Issued 10/02/79
Temporary Refuse Permit	MSHA P.O. Box 25367 Denver, Colorado 80225	1211-UT-9-0033	Issued 10/02/79 Terminated on 03/19/81
Permanent Refuse Permit	MSHA P.O. Box 25367 Denver, Colorado 80225	1211-UT-09-01444-01	Issued 10-02/79 Reassigned No. on 08/10/00
UPDES Discharge Permit	Utah Dept. of Environmental Quality 288 North 1460 West Salt Lake City, Utah 84114-4870	UTG040005	Issued 05/01/03
Air Quality Approval Order	Utah Division of Health Bureau of Air Quality 150 North 1950 West Salt Lake City, Utah 84114-4820	DAQE-ANI793003-06	Issued 08/16/06
State Permit Approval	State of Utah Division of Oil, Gas & Mining 1594 West No. Temple Suite 1210 Salt Lake City, Utah 84114-5801	C/007/022	Issued 08/06/84 Renewal 08/06/04

Appendix 1-3

Public Notice
Permit Renewal Application

Savage Services Corporation
Savage Coal Terminal

PUBLIC NOTICE FOR PERMIT RENEWAL
SAVAGE COAL TERMINAL
SAVAGE SERVICES CORPORATION
6340 SO. 3000 E. #600
SALT LAKE CITY, UTAH 84121

Savage Services Corporation has filed with the Utah Division of Oil, Gas & Mining, an application for renewal of its Mining and Reclamation Plan Permit for the Savage Coal Terminal.

The permit for which renewal is being sought is Utah #C/007/022. This is a Mining and Reclamation Permit for the Savage Coal Terminal, which is located in the Miller Creek area of Carbon County, Utah in Sections 2 and 11, Township 15 South, Range 10 East, Salt Lake Base & Meridian.

The permit area is further described as follows:
Township 15 South, Range 10 East, Salt Lake Base & Meridian
Sec. 11: W ½ SW ¼ except 0.24 ac. in NW corner, E ½ SW ¼ except East 100' and 5.42 ac. in SW corner.

Also included in the permit area is a 20' Right-of-Way for a pipeline across the SE ¼ NW ¼ and NW ¼ NW ¼ of Section 11 (1.21 acres), and across the SW ¼ SW ¼, NW ¼ SW ¼, SW ¼ NW ¼ and NE ¼ NW ¼ of Section 2 (3.97 acres). This area is located on the "Price Quadrangle", U.S. Geological Survey 7.5 minute map.

The permit is available for inspection at the Utah Division of Oil, Gas & Mining office in Price, College of Eastern Utah, 451 E. 400 N., Price, Utah, and the Utah Division of Oil, Gas & Mining office, 1594 West North Temple, Suite 1210, Salt Lake City, Utah.

The application for renewal is available for inspection at the Utah Division of Oil, Gas and Mining Office in Price, College of Eastern Utah, 451 E. 400 N., Price, Utah, and the Utah Division of Oil, Gas & Mining office, 1594 West North Temple, Suite 1210, Salt Lake City, Utah.

Written comments, objections or requests for informal conferences on the application may be submitted to: State of Utah Department of Natural Resources, Division of Oil, Gas & Mining, 1594 West North Temple, Suite 1210, P.O. Box 145801, Salt Lake City, Utah 84114-5801.

AFFIDAVIT OF PUBLICATION

STATE OF UTAH)

ss.

County of Carbon,)

I, Ken Larson, on oath, say that I am the Publisher of the Sun Advocate, a twice-weekly newspaper of general circulation, published at Price, State a true copy of which is hereto attached, was published in the full issue of such newspaper for 4 (Four) consecutive issues, and that the first publication was on the 4th day of May, 2004, and that the last publication of such notice was in the issue of such newspaper dated the 25th day of May, 2004.

Ken G. Larson

Ken G Larson - Publisher

Subscribed and sworn to before me this 25th day of May, 2004.

Linda Thayn

Notary Public My commission expires January 10, 2007 Residing at Price, Utah

Publication fee, $ 432.64

LINDA THAYN
NOTARY PUBLIC • STATE of UTAH
845 EAST MAIN
PRICE, UTAH 84501
COMM. EXPIRES 1-10-2007

PUBLIC NOTICE FOR PERMIT RENEWAL
SAVAGE COAL TERMINAL
SAVAGE SERVICES CORPORATION
6340 SO. 3000 E. #600
SALT LAKE CITY, UTAH 84121

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The permit for which renewal is being sought is Utah #C/007/022. This is a Mining and Reclamation Permit for the Savage Coal Terminal, which is located in the Miller Creek area of Carbon County, Utah in Sections 2 and 11, Township 15 South, Range 10 East, Salt Lake Base & Meridian.

The permit area is further described as follows:
Township 15 South, Range 10 East, Salt Lake Base & Meridian
Sec. 11: W 1/2 SW 1/4 except 0.24 ac. in NW corner, E 1/2 SW 1/4 except East 100' and 5.42 ac. in SW corner.

Also included in the permit area is a 20' Right-of-Way for a pipeline across the SE 1/4NW 1/4 and NW 1/4 NW1/4 of Section 11 (1.21 acres), and across the SW 1/4 SW 1/4, NW 1/4 SW 1/4, SW 1/4 NW1/4 and NE 1/4 NW 1/4 of Section 2 (3.97 acres). This area is located on the "Price Quadrangle", U.S. Geological Survey 7.5 minute map.

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Published in the Sun Advocate May 4, 11, 18 and 25, 2004.

Appendix 1-4

Certification
of
Corporate Secretary

Savage Services Corporation
Savage Coal Terminal

CERTIFICATION STATEMENT

I, as a responsible official of the applicant, do hereby certify that the information included in this application is true and correct to the best of my information and belief.

Kelly J. Flint
Sr. Vice President, General Counsel and Secretary

Subscribed and sworn to before me this 5th day of February 2009

Notary Public

My Commission Expires: 9-10-11

State of: Utah

County of: Salt Lake

Appendix 1-5

Purchase Agreement for Savage Coal Terminal

Savage Services Corporation
Savage Coal Terminal

00063249 Bk00399 Pg00609-00609

ANN B. O'BRIEN-COUNTY OF CARBON
1997 DEC 09 15:49 PM FEE $12.00 BY
REQUEST: PROFESSIONAL TITLE SERVICES

SPECIAL WARRANTY DEED

For Ten Dollars ($10.00) and other good and valuable consideration, MOUNTAIN COAL COMPANY, a Delaware corporation, successor to Beaver Creek Coal Company, and successor to Swisher Coal Company, whose address is 555 17th Street, Denver, Colorado 80202, hereby conveys and warrants against all claiming by, through, or under it, to SAVAGE INDUSTRIES INC., a Utah corporation whose address is 5250 South 300 West, Suite 200, Salt Lake City, Utah 84107 the following described tract of land:

The Southwest Quarter of Section 11, Township 15 South, Range 10 East, Salt Lake Base and Meridian.

Situate in Carbon County, State of Utah.

EXCEPTING the most Easterly 100 feet thereof.

ALSO EXCEPTING the following: BEGINNING at a point 227.59 feet North and 269.61 feet East of the Southwest Corner of said Section 11, and running thence North 45°39'45" East 69.47 feet; thence North 58°29'30" East 372.17 feet; thence South 68°31'00" East 516.41 feet; thence South 280.99 feet, more or less, to the South boundary of said Section 11; thence South 89°58'22" West 342.25 feet along the South boundary of said Section 11; thence North 49°17'10" West 225.38 feet; thence North 76°30'50" West 343.93 feet, more or less, to the point of beginning.

ALSO EXCEPTING the following: BEGINNING at the West Quarter Corner of said Section 11, and running thence East 200.00 feet; thence Southwesterly along the arc of a 225 feet radius curve 306.3 feet, more or less, to a point 200.00 feet South of the point of beginning, thence North 200.00 feet to the point of beginning.

EXCEPTING therefrom all oil and gas in the West one-Half of said Southwest Quarter, with the right to prospect for, mine and remove the same.

EXCEPTING therefrom all oil, gas and other minerals in the East One-Half of said Southwest Quarter, with the right to prospect for, mine and remove the same.

Dated: December 4, 1997.

MOUNTAIN COAL COMPANY,
a Delaware corporation

By: Gene E DiClaudio
Gene E. DiClaudio

PTS 9941

RECORDED AT THE REQUEST OF
PROFESSIONAL TITLE SERVICES

STATE OF COLORADO)
) ss.
COUNTY OF Delta)

The foregoing instrument was acknowledged before me this 4th day of December, 1997 by Gene E. DiClaudio, the President of MOUNTAIN COAL COMPANY, a Delaware corporation.

F. Jean Morris
Notary Public

JEAN MORRIS NOTARY PUBLIC COLORADO

F. JEAN MORRIS
NOTARY PUBLIC
STATE OF COLORADO
My Commission Expires 03/26/2000

Table of Contents
Savage Coal Terminal
Chapter 2 - Soils

gallons/acre. 2000 pounds per acre of wood fiber mulch and 60 pounds per acre of tacifier were then applied to the surface. Seeding took place during the week of October 23, 2006. It should be noted that the berm constructed with other excavated material from the ponds was also seeded at this time.

The topsoil piles are protected by a combination of efforts, including existing berms and revegetation as described above.

Plate 5-1 indicates disturbance created before and after May 1978. Topsoil material that has been stockpiled and in-place soil to be disturbed contain insufficient volumes of material to cover all of the projected disturbed area to a minimum of six (6) inches. Thus, as discussed in Section 224, the Disturbed Land Map Unit will be revegetated in-place since no better topsoil material exists for reclamation.

All post-law disturbance and the entire refuse area (a total of 55.31 acres after the 2006 stripping) will receive a minimum cover of six inches of topsoil/subsoil. Table 2-6 provides the volumes of soil currently in storage.

Even distribution of six inches over 55.31 acres would require 44,617 cubic yards of material. Therefore, the 62,314 cubic yards of topsoil/subsoil currently in storage is enough to accommodate the proposed reclamation plan.

231.200 Nutrients and Soil Amendments

Soil tests will be taken in materials to be used for final reclamation in order to evaluate the need for soil amendments and nutrients. Soil testing will be performed by a qualified laboratory which uses accepted analytical procedures.

In April 2002, an additional 12,140 cubic yards of topsoil were stripped and placed between the existing topsoil and subsoil piles. The topsoil and subsoil piles were then blended together into one pile, roughened, mulched and seeded. This increased the volume of the Topsoil Stockpile to 49,286 cubic yards. In 2006, an additional 13,028 cubic yards of topsoil/sub-soil were stripped and placed in separate storage piles located north of the office building, bringing the total storage volume to approximately 62,314 cubic yards.

Windy Gap Process

Water usage at the Savage Coal Terminal for 2008 was 29.91 acre feet. This water was used for coal washing, road watering and washdown of facilities. Based on the above figures, water usage at the site amounts to approximately 1.365 gallons per ton of coal shipped from the site.

Since the make-up water for the loadout site is supplied by an alluvial well adjacent to the Price River, all of the 29.91 ac.ft. is considered a direct depletion to streamflow. It should be noted that water from sediment ponds, groundwater and recirculated plant water amounts to approximately 50% of the water used; however, since each of these sources would eventually reach the Price River, the actual maximum depletion would be the same. All water usage is from water shares owned by the company.

No water depletion is considered for moisture loss from the coal, since this is a transloading facility and coal moisture loss has been charged to the respective producers.

322.220. As indicated in Section 322.210, there are no habitats of unusually high value for fish and wildlife at the Savage Coal Terminal.

322.230. See Section 322.210 for discussions of protected species.

322.300. Fish and Wildlife Service review.

Upon request, the Division will provide the resource information required under R645-301-322 and the protection and enhancement plan required under R645-301-333 to the U.S. Fish and Wildlife Service Regional or Field Office for their review. This information will be provided within 10 days of receipt of the request from the Service.

323. Maps and Aerial Photographs.

Maps or aerial photographs of the permit area and adjacent areas will be provided which delineate:

323.100. Vegetation reference areas are shown on Plate 3-1.

323.200. See Section 322.210 for information relative to wildlife studies.

323.300. Raptor protection is discussed under Section 322.210.

323.400. See Plate 3-1.

330. Operation Plan

331. As discussed under Section 321.100, the disturbed area at the Savage Coal Terminal is approximately 137.79 acres (including the river pumps and pipeline). It is the intent of the operator to minimize disturbance and perform contemporaneous reclamation where possible; however, the existing disturbance is necessary to provide adequate facility space, coal storage area, sediment control and refuse area.

Surface erosion of the topsoil stockpile areas is controlled by vegetation and roughening to reduce runoff.

The reclamation plan discussed under Section 340 will provide details on revegetation at this site.

332. N/A - This is a surface operation only.

333. Expected Impacts of Mining Operations on Fish and Wildlife

The wildlife species that do occur on the site consist mainly of small mammals and some songbirds. These species appear to be capable of existing on the site in spite of on-going mining operations unlike larger mammals and raptors. Therefore, little if any impact to wildlife is expected on the Savage Coal Terminal site.

Mitigation and Management Plans

The proposed post-mining land use for the Savage Coal Terminal is "Light Industrial", since the area is presently zoned for industrial use. However, since the pre-disturbance land use was primarily song bird and small mammal habitat, Savage Services Corporation will reclaim toward this goal to maximize usable area for wildlife in the event local economics preclude continued industrial use of the site.

Even though the Savage Coal Terminal site provides minimal habitat for wildlife, every effort is being made to temporarily reclaim areas the have been disturbed but are no longer needed for operations at the site. In this manner, the company is capable of restoring the limited habitat that does exist for small mammals and songbirds.

The company also has made the employees aware that harassment or hunting of wildlife on the site is not permitted. Sensitive periods

The company also has made the employees aware that harassment or hunting of wildlife on the site is not permitted. Sensitive periods (e.g. nesting seasons, snake dens, etc.) have also been discussed with company personnel.

The long-term management plan for the Savage Coal Terminal site is to continue the above mitigation measures throughout the life of operations. Upon cessation of operations, the company will direct its efforts towards reclaiming the site compatible with the post-mining land use which is small mammal and songbird habitat.

333.100. See Sections 322 and 333.

333.200. See Sections 322 and 333.

333.300. See Sections 322 and 333.

340. Reclamation Plan.

Complete reclamation plans for the Savage Coal Terminal are presented in Section 540 of this permit application. (Sections 341. through 342.400 are addressed in that section.)

341. Revegetation.

See Section 540.

342. Fish and Wildlife.

See Section 540.

350. Performance Standards

351. General Requirements.

All coal mining and reclamation operations will be carried out according to plans provided under R645-301-330 through R645-301-340.

352. Contemporaneous Reclamation.

As previously discussed, the vast majority of presently disturbed areas at Savage Coal Terminal are necessary to maintain adequate space for facilities, coal stockpiles, sediment controls and refuse areas. Disturbed areas that are no longer necessary have been, and will continue to be, reclaimed and/or reseeded with an approved temporary seed mix. (See Section 540).

353. Revegetaion: General Requirements.

Revegetation is discussed in detail under Section 540.

354. Revegetation: Timing.

See Section 540.

355. Revegetation: Mulching and Other Soil Stabilizing Practices.

See Section 540.

356. Revegetation: Standards for Success.

See Section 540.

357. Revegetation: Extended Responsibility Period.

See Section 540.

358. Protection of Fish, Wildlife, and Related Environmental Values.

Protection of Fish, Wildlife and Related Environmental Values is discussed under Section 333 of this permit.

Savage Services Corporation
Savage Coal Terminal
C/007/022

Chapter 5

Engineering

R645-301-500

R645. Natural Resources; Oil, Gas and Mining; Coal.

R645-301. Coal Mine Permitting: Permit Application Requirements.

R645-301-500. Engineering.

510. Introduction.

The engineering section of this permit application is divided into the operation plan, reclamation plan, design criteria, and performance standards. All of the activities associated with the coal mining and reclamation operations are designed, located, constructed, maintained, and reclaimed in accordance with the operation and reclamation plan. All of the design criteria associated with the operation and reclamation plan will be met.

511. General Requirements.

Each permit application will include descriptions of:

511.100. Proposed Operations

This section outlines the scope of mining, environmental control and reclamation activities that will occur under the terms of the permit. The purpose of this plan is to provide the regulatory authority with comprehensive and reliable information which ensures that proposed activities will be conducted in compliance with the Act, the regulations, and guidelines of the permanent regulatory program.

Surface Facilities

Site Selection and Preparation

Utah Power & Light originally leased the site for coal loading operations because of its proximity to the Denver and Rio Grande Western (D&RGW) railroad siding. Swisher Coal Company purchased the SW ½ Section 11 for the purpose of developing a preparation and loadout facility for unit coal trains. The site was also advantageous because of its central location to the contributing coal mines. Original UP&L disturbance occurred in 1975. Expansion activities by Swisher Coal Company were conducted between October 1977 and April 1978. The site was purchased by ARCO in 1980, and was sold to Savage Industries, Inc. (now Savage Service Corporation) in 1995. The facility name was then changed to Savage Coal Terminal. Plate 5-1 presents surface disturbance as of the submittal date of this application.

Maintenance

All support facilities at Savage Coal Terminal will be maintained and used in a manner which prevent damage to fish, wildlife and related environmental values and prevents additional contributions of suspended solids to streamflow or runoff outside the permit area.

Facilities Construction Dates

The following is a list of facilities and approximate dates on which construction begun and completed on each:

Facility	Construction Begun	Construction Completed
Preparation Plant	10/77	12/78
Conveyors	10/77	4/78
Silo/Loadout	10/77	4/78
Shop/Lab/Warehouse	3/80	6/80
Power Line/Substation	10/77	4/78
Pumphouse	8/78	10/78
Scales/Scalehouse	2/78	4/78
Refuse Pile	12/78	On-Going
Railroad Loop	10/77	4/78
Roads/Parking Areas	10/77	4/78
Water System	10/77	10/78
Culinary Water	8/84	9/84
Sewage System	3/80	5/80
Diversion Ditches	6/78	6/79
Sedimentation Ponds	6/78	6/79
New Shop/Oil Storage	10/05	4/06
New Reclaim Conveyor	10/05	6/06
New Stacking Tube	04/06	8/06
New Plant Feed Conveyor	08/06	11/06
New Stacking Conveyor	08/06	11/06
New Raw Coal Conveyor	08/06	11/06
Settling Ponds	08/06	11/06
Refuse Conveyor	08/06	11/06
Storage to Silo Conveyor	10/07	12/07

Buildings and Structures

All buildings and structures at the Savage Coal Terminal are shown on Plate 5-2. There are no present plans to modify or re-construct any structures at this site.

Coal Refuse and Non-Coal Storage/Disposal

Storage sites for stockpiled coal and disposal of coal processing refuse and non-coal wastes are shown on Plate 5-2.

Non-Coal Waste Disposal

Temporary storage of non-coal waste is in a metal trash receptacle and/or a designated storage area. As needed, the garbage is loaded into a truck and disposed of within an approved sanitary landfill. See Plate 5-2 for locations.

Oil and Grease Disposal

Oil and grease wastes are collected in a surface tank for temporary on-site storage. As needed, this tank is pumped out by a licensed contractor and removed for recycling. All oil, grease and anti-freeze wastes at Savage Coal Terminal are recycled, and none of these wastes are stored in underground tanks or disposed of in any landfill.

Coal Processing Waste Disposal

The coal processing waste disposal sites are designed and constructed to meet all requirements of R645-301-536. Plate 5-3, Refuse Disposal Plan, shows the planned locations and cross-sections of refuse disposal areas #1, #2, and #3. Coal processing waste from the 2006 plant restart is taken to the approved Dugout Canyon Mine refuse site per contract agreement.

Transportation Facilities

Roads

The location of access and coal haulage roads and parking areas are provided on Plates 5-2 and 5-4.

All roads on the site will be maintained throughout their life to meet the design standards. This will include, as necessary, regrading, resurfacing, cleaning of ditches and culverts, watering and/or sweeping for dust control.

If a road is damaged by a catastrophic event, it will be repaired as soon as practical after the damage has occurred.

All roads will be removed and regraded upon final reclamation of the site.

The following is a description of each of the primary roads on this site:

PR-1
Main entrance and coal haul road on west side. Road runs from west entrance to preparation plant. Approximately 1705' long with an average grade of 2.23%. Approximately 770' of road is paved, and the balance is gravel-surfaced. Road is approximately 24' wide.

PR-2
Haul road from SW entrance to intersection with PR-1. Approximately 1720' long with an average grade of 1.51%. Entire length of road is paved, and is 24' wide.

PR-3
This is the No. 1 Truck Dump loop road. The road is approximately 1425' in length with a maximum plus grade of 7.06% and a maximum minus grade of 6.45%. This is a gravel-surfaced road and is 24' wide.

PR-4
Refuse haul road, running from the wash plant to the refuse pile. The road is approximately 3840' long and has an average grade of 0.42%. This road is gravel-surfaced and maintained at a width of 20'.

PR-5
This is the pumphouse road running from the intersection with the refuse road (PR-4) to the pumphouse. The road is approximately 625' long with an average grade of 0.96%. It is gravel-surfaced and approximately 16' wide.

PR-6
Sample house road, running from the refuse road (PR-4) to the sample building/loadout tunnel. The road is approximately 545' long with an average grade of 1.83%. It is gravel-surfaced and approximately 16' wide.

PR-7
No. 2 Truck Dump Road, running from its intersection with PR-1, over the truck dump and back to the intersection with PR-2. The road is approximately 2340' in length with an average grade of 1.28%. It is a gravel-surfaced road with a width of approximately 24'.

PR-8
Truck Dump No. 5 Road, running from PR-7, across the No. 5 Truck Dump and back to the PR-7. This road is approximately 890' in length with an average grade of 2.02%. The road is gravel-surfaced and is 20' wide. Maximum grade down from the truck dump is 9.00%.

PR-9
Topsoil Pile Road, running from PR-7 to the refuse road (PR-4). This road is approximately 420' long with an average grade of 1.91%. The road is gravel-surfaced and approximately 20' wide.

PR-10
Truck Dump No. 3 Road running from the refuse road (PR-4) over the No. 3 truck dump and back to PR-4. It is approximately 560' in length with a maximum grade of +10.00% up and -10.34% down. The road is gravel-surfaced and approximately 16' wide.

PR-11
This is a short length of road constructed to tie the 2 main haul roads, PR-1 and PR-2, together. The road is approximately 400' in length with an average grade of 0.25%. This road is gravel-surfaced and approximately 24' wide.

PR-12
Office/Shop Road, running from PR-1 across the office parking pad and down to the intersection of PR-1 and PR-3. The road is approximately 575' in length with an average grade of 1.74%. It is gravel-surfaced and approximately 20' wide.

PR-13
This is the access/haul road for the new settling ponds. The road runs from PR-12, below the office, to the settling ponds. The road is approximately 950' in length with an average grade of approximately 2.22%. The road is gravel-surfaced and approximately 16' wide.

The above referenced roads are all considered "Primary Roads" as provided in R645-301-527.100. All other roads on the site are considered "Ancillary Roads", as described below.

The following are considered "Ancillary Roads" as shown on Plate 5-4.

AR-1
This is an access on the east side of the settling ponds, used primarily for periodic cleaning of the ponds. It is approximately 700' long with an average grade of 2.25%.

AR-2
This is an access road used only occasionally for inspection purposes. It is approximately 1270' in length at an average grade of 1.73%, and runs from the pump house pad west along the north edge of ponds 1, 2 & 3.

AR-3
This is an access road around the back side of the refuse pile, used only occasionally. It is about 2250' long with an average grade of 1.67%.

AR-4
This road is primarily used by railroad personnel, and only on an infrequent basis. It runs parallel to the railroad behind the refuse pile area. It is approximately 1500' long, at a grade of approximately 2.50%.

The following information pertains to all roads on the site:

1- Roads are located, designed, constructed, reconstructed, used, maintained and will be reclaimed to:

a. Prevent or control damage to public or private property;
b. Use non-acid or non-toxic substances in road surfacing;
c. Have a minimum static safety factor of 1.3 for all embankments;
d. Be removed and regraded during the final site reclamation;
e. Using current, prudent engineering practices to control or prevent erosion, siltation or air pollution;
f. To ensure environmental protection and safety by designing roads with appropriate limits for use and type and size of equipment used.

In addition, all Primary Roads will meet the following requirements:

a. Be located, constructed and maintained in such a manner as to protect fish wildlife and related environmental values by avoiding wetlands, using non-acid and non-toxic materials, providing adequate drainage and employing the lowest practical speed limits on site;
b. Be located on the most stable available surface (see Plate 5-4);
c. Be surfaced with crushed gravel or asphalt to provide durability for the volume, weight and speed of the anticipated vehicles;
d. Be routinely maintained to provide intended use;
e. Have culverts designed, installed and maintained to sustain the vertical soil pressure, passive resistance to the foundation, and the weight of the vehicles using the road. All culverts are steel or corrugated metal pipe and are of adequate strength to withstand expected vehicle weights. No failures have ever been noted.

Railroads

A major railroad grade embankment (approximately 4'-12' in height) is located on the eastern edge of the site, immediately outside of the permit area. This grade supports the main rail line(s) and is owned and maintained by the Denver and Rio Grande Western Railroad. This line will undoubtedly remain in service after closure of the Savage Coal Terminal.

The railroad loop within the Savage Coal Terminal is owned by Savage Services Corporation. It consists of a single set of tracks slightly elevated (3') above natural ground. This rail serves as a loop for the unit trains to travel head-first into the silo, eliminating the need for engine switching. The loop is 8,340 feet long. This rail line will be used and maintained throughout the Savage Coal Terminal operational life.

Grades and typical cross-section of the rail loop are shown on Plate 5-5, "Railroad Facilities".

Conveyors

There are eighteen (18) separate, permanent conveyor runs at the Savage Coal Terminal (see Figure 5-7). In addition, there are temporary, portable conveyors used on the site. The number and location of the temporary conveyors varies according to need.

Conveyor #1 - 36" x 250' long stacking conveyor from the truck dump to the raw coal stacking tube.

Conveyor #1a - 36" x 250' long stacking tube conveyor from the above raw coal stacking tube to a new steel stacking tube. (Appendix 3-8 BC-01)

Conveyor #1b - 36" x 233' conveyor from new stacking tube area to wash plant. (Appendix 3-8 BC-02)

Conveyor #1c - 36" x 130' stacking conveyor from wash plant to clean coal pile on north side. (Appendix 3-8 BC-05)

Conveyor #1d - 36" x 200' conveyor for -1/4" coal from wash plant to raw coal pile to west. (Appendix 3-8 BC-03)

Conveyor #1e - 36" x 101' conveyor to carry refuse from the wash plant to the refuse bin. (Appendix 3-8 BC-04)

Conveyor #2 - 36' x 300' reclaim conveyor from raw coal pile to conveyor #9.

Conveyor(s)#3-(2) 36" x 365' clean fine and coarse coal conveyors from the plant to the clean coal stacking tube.

Conveyor #4 - 36" x 225' clean fine coal transfer conveyor from coarse coal stacking tube to fine coal stacking tube.

Conveyor #5 - 48" x 600' clean coal reclaim conveyor from clean coal piles to transfer in loadout sample building.

Conveyor #6 - 48" x 660' loading conveyor from transfer point in sample building to 10,000 ton silo.

Conveyor #7 - This conveyor is 36" x approximately 350' and runs from the new truck dump to a crushed coal stacking tube.

Conveyor #8 - 42" x 150' conveyor from the new truck dump to the twin 36" conveyors described in #3 above.

Conveyor #9 - 48" x 440' conveyor from the plant feed belt to the clean coal stacking tube area.

Conveyor #10 - 48" x 728' elevated conveyor from truck loop storage area to conveyor #9.

Conveyor #11 - 48" x 246' feed conveyor from the truck loop storage area to conveyor #10.

Conveyor #12 - 48" x 564' surface transfer system to move coal from the track loop storage area to conveyors #10 and #11.

Conveyor #13 - 48" x 375' feed conveyor from storage area to silo feed conveyor #6.

Grades of all conveyors are shown on Figure 5-7. "Conveyors - Loadout & Grades". All surface conveyors are covered and equipped with walkways. All conveyors will be used throughout the Savage Coal Terminal operational life.

Maintenance

Transportation facilities are maintained and will be restored to prevent damage to fish, wildlife and related environmental values, as well as additional contributions of suspended solids to streamflow or runoff outside the permit area. In addition, they are maintained in a manner to control and minimize degradation of water quality and quantity, control and minimize erosion and siltation as well as pollution. This is accomplished in the following ways:

(1) All conveyors are covered to minimize fugitive dust;

(2) The use of stacking tubes for coal pile minimizes fugitive dust from free-falling coal;

(3) Coal is drawn into the plant and silo conveyors by underground feeders, equipped with water sprays to minimize dust;

(4) The unit train loadout is within an enclosed area, and water sprays are available if necessary to reduce dust;

(5) Roads are paved and/or watered as necessary to minimize dust:

(6) Drainage controls are maintained to prevent contaminated water from the disturbed area from leaving the permit area.

Water Management Facilities

The process water system for the preparation plant is designed so that under normal operating conditions no waste water is discharged and makeup water is added only to replace absorption losses of water into the coal and refuse. A six-inch pipeline from a pumping station at the Price River is the primary water supply. This pipeline, as well as the secondary makeup water source (the sedimentation ponds) feeds a collection sump housed on the northeast corner of the site. (See Plate 5-2) From there water is then drawn on demand into the prep plant.

Sewage System

There are two (2) wastewater disposal facilities at Savage Coal Terminal (See Plate 5-2). Both sites are of the septic tank-drainfield type and each is approved by the Utah Health Department.

Storm Runoff and Sedimentation Control

Sedimentation ponds provide for collection and treatment of surface water runoff from all disturbed areas at the sire. Water control facilities are shown on Plate 5-2 and further described in Chapter 7.

Undisturbed Flow Diversions

Overland runoff from areas west and northwest of the Savage Coal Terminal site is intercepted by a diversion ditch which carries the runoff northeasterly around the site, emptying into a drainage ditch leading northwards away form the site. Shallow groundwater flows moving toward the site from the west and the north are intercepted by a buried perforated pipe which carries the flows around the west and north edge of the site to a sump (housed on the northeast corner of the site, see Operations Map) where it can then be piplined to the Price River. These facilities are important to the entire water management system at the Savage Coal Terminal, but because they are simply diversions of off-site flows, no UPDES permitting of the discharges is required.

Sedimentation Ponds

All disturbed area surface runoff up to the 10-year, 24-hour storm level is collected in a series of incised impoundments connected by spillways and drawdown pipelines. The lowermost pond (No. 6) is equipped with gravel filter dikes, an open channel spillway, and a 6-inch steel drainpipe connecting the pond to the nearby prep plant makeup water line. The gravel dikes and drain pipe provide for useful return of cleaned surface water to the preparation plant, thereby minimizing off-site discharge from the sedimentation ponds. Issuance of UPDES discharge permit by the EPA and Utah Health Department has established the open-channel spillway of pond No. 6 as UPDES Outfall No. 001.

Power Supply and Transmission Lines

The primary electrical service for the Savage Coal Terminal is from a 44.5k V transmission line owned and operated by Utah Power and Light Company. This HVTL skirts the north and west edge of the property and lies within the permit boundary on a utility easement.

A 12.5k V overhead line extends from the northeast corner of the property to the substation adjacent to the coal processing plant (see Plate 5-2).

A 12.5k V overhead distribution line extends from the west edge of the property to the shop/lab/warehouse facility.

Various lower voltage underground distribution lines extend from the substation to the truck dumps, stacking tubes, etc.

Operations Plan

Plant Processing System

Raw coal will be fed into the plant wash box via the existing feed conveyor. -1/4" material will be separated prior to washing, and conveyed to the 2 x 0 clean coal pile west of the plant. It should be noted this will include the majority of the minus 28 mesh material which is to be later separated in the settling ponds. Refuse will be separated from the coal and placed in the refuse bin for loadout. The clean coal will continue through the plant systems for sizing and drying, with the final, clean product being stockpiled on the north side of the plant. Residual minus 28 mesh material from the washing cycle will be pumped to the settling ponds where the solids are settled out and the process water is clarified and returned to the plant wash cycle.

Washed Coal System

The washing cycle will operate in the same manner as the previous plant operation, except there will be no static thickener for removal of fines and water clarification. Minus 1/4" material will not be washed. As the +1/4" product is washed, only the residual minus 28 mesh material still adhering to the larger product is pumped to the series of settling ponds constructed northeast of the main office building. The fines will be settled in these ponds, and the clarified water will return to the plant in a separate line for reuse in the washing cycle. A dual set of ponds have been constructed as shown on Plate 5-2. When one set of ponds become full of settled fines, the valves can be switched to the other set of ponds, allowing the previous set to be cleaned.

It should be noted that the ponds are constructed in such a manner as to prevent inflow from site runoff, and will not be part of the sedimentation and drainage control system for the site. The ponds are incised; however, they are also be surrounded by a raised berm to prevent runoff inflow, as shown on Plate 7-6. The settling ponds provide the same function as the previously operated static thickener, and still allow for the plant wash cycle to operate as a closed-loop circuit with no discharge except in the event of an emergency. If such an emergency should occur, any discharge from the plant or settling ponds would be contained by the sedimentation ponds on site.

The -28 mesh coal slurry to be settled in the ponds will be pumped to the ponds at a rate of approximately 25 gpm, with a projected maximum amount of -28 mesh material of 1 ton per hour. The material removed from the settling ponds during cleaning will be treated as a coal product and blended in with coal shipments, rather than being disposed of as refuse.

When one set of ponds become full of settled material, the valves will be switched to use the adjacent set of ponds, while the full set is allowed to dry and be cleaned. Cleaning will be accomplished by a trackhoe, loader or dozer, or a combination of equipment. Actual equipment utilized for cleaning will depend on availability and conditions at that particular time; however, all pond cleaning operations will be conducted to minimize damage to the ponds and to minimize impacts to the environment.

It should be noted that the ponds are constructed with raised berms all around as shown on Figure 5-13. Runoff from the undisturbed area west of the ponds will flow into the undisturbed diversion ditch UD-1. Runoff from the disturbed area around the ponds, as well as from the material cleaned from the ponds will flow to the existing disturbed area collection ditch CD-6 and to the sediment ponds, as shown on Plate 7-2.

The material removed from the ponds will be windrowed on the northwest side of the ponds or trucked to a coal storage area for drying. Once the material is dry enough to handle, it will be taken by a front-end loader to the 2 x 0 clean coal pile west of the plant. The proposed drying area is considered part of the overall coal stockpile area in the air quality approval order. It should be noted that, since the minus 1/4" material is not washed, the only minus 28 mesh material settled in the ponds will be the residual material adhering to the larger size washed product. As a result, the settling ponds will very likely not need cleaning more than once a year.

The details for the proposed settling ponds are shown on Plate 7-6 and Plate 5-2. The ponds have a total capacity of 11.11 acre feet and therefore do not meet any of the criteria of 30 CFR 77.216(a).

The ponds were constructed under the supervision of a registered professional engineer. The pond construction was monitored and inspected by the P.E. during construction, and certified upon completion, to ensure compliance with performance standards. The ponds will be inspected by a qualified individual at least quarterly, and certified with other impoundments annually. The ponds will be checked and maintained on a regular basis to ensure they operate in a safe, efficient manner. Maintenance may include cleaning, drainage control and erosion control.

The settling ponds have a total storage capacity of 11.11 acre feet. Only 2 of the 4 ponds will be used at one time, reducing the active water storage capacity to 5.56 acre-feet. The ponds are approximately 95% incised, with only a small portion of the dam above ground level. This would leave only 0.278 acre-feet of potential water release in the event of a failure of the ponds. This water would flow to the disturbed ditch CD-6 and into Ponds 1, 2, 3 and 6. The wash plant will contain a maximum of 23,500 gallons, or approximately 0.07 ac.ft. of water at any given time. In the event of a failure, at least 10,000 gallons of this water would remain in the plant in 2 below-floor sumps, with the balance of approximately 13,500 gallons, or 0.04 acre feet of water going to Ponds 1, 2, 3 and 6. This amount added to the maximum potential release from

the ponds, will total 0.319 acre feet, or approximately 0.012 ac.ft. less than the excess pond capacity. Therefore, the ponds would safely contain a worst case discharge from both the settling ponds and plant along with the runoff and sediment from a 10-year, 24-hour precipitation event. The sedimentation ponds have previously been shown to present no significant risk of harm to the environment or public health; therefore, since the proposed settling ponds would flow to and be contained by, the sediment ponds, they also present no significant risk of harm to the environment or public health.

Non-Washed Coal System

Contract coal from various customers is received in double trailer bottom dump and rear dump highway trucks. This coal may be shipped as received, or crushed and screened as necessary. Facilities used for this operation include truck dumps, transfer belts, stacking tubes, and a reclaim belt and tunnel.

Loadout System

The loadout silo is totally enclosed, and will contain 10,000 tons of coal for loading. Unit trains of up to one hundred 100-ton cars are brought into the property, around the track loop and into the base of the silo. Loading of the train is controlled by 2 hydraulic operated gates and chutes. Trains are then loaded out at a rate of 5,000 to 7,500 tons per hour.

Coal Handling

The Savage Coal Terminal facility has the capability and approval for shipping up to 10.0 million tons per year.

Signs, Fences and Gates

The main access road entrances to the site are marked with a permit identification sign (Figure 5-1) identifying the name, operator, and current operating permits. Other signs encountered on the site include perimeter boundary markers, soil stockpile signs, vegetation reference area signs, and MSHA-required refuse area disposal signs. (Figures 5-1 and 5-2.)

A three-strand wire fence encircles the quarter-section site. One vegetation reference area is separately fenced with a 3-strand barbed wire fence. Locked gates secure the main access to the site during non-operating hours.

Savage Services Corporation will install and maintain signs or markers required during the activities to which they pertain, or until bond release.

Safety, Fire Protection and Security

Savage Services Corporation Safety Department personnel routinely inspect all phases of the operation for compliance with Mine Health Safety Administration (MSHA) safety standards.

Fire protection meets or exceeds all MSHA standards. Fire protection maps are posted on each floor which designates locations of fire extinguishers and escape routes. The plant is also equipped with a hydrant system and strategically located firehoses.

Safety during non-operating hours is accomplished by the locked main access gates.

Operating Schedule and Employment

The Savage Coal Terminal operates two (2) shifts/day and the third shift is a scheduled maintenance shift. The operation is scheduled 240 days per year.

Three (3) salaried and seventeen (17) hourly employees currently operate the facility.

511.200. Potential Impacts and Protection

Upon completion of operations at Savage Coal Terminal, final reclamation work will commence. Reclamation efforts will be directed to recreating the pre-disturbance land use which was small mammal and songbird habitat.

This will be achieved by use of an acceptable seed mixture with shrubs and grasses.

Projected Impacts of Mining on Current and Future Land Use

Surface disturbance will be limited to what is necessary for operations at Savage Coal Terminal. Future disturbance will consist mainly of areas needed for additional coal storage areas. Operations have not affected public facilities or roads and are not projected to at the present time.

Control Measures to Mitigate Impacts

Based on the boundaries of the present surface disturbance, no public parks or historic places will be impacted by operations so mitigation measures need not be discussed here. A further discussion of Cultural Resources may be found in Chapter 4.

Protection of Human Values

As discussed in Chapter 4, there are no sites currently registered on or proposed for the National Register of Historic Places. Also no known archaeological sites are known to occur in the area.

Preservation of Soil Resources and Projected Impacts of Mining on Soil Resources

Soils of Savage Coal Terminal were mapped and analyzed in July, 1980. At that time natural occurring soil bodies were distinguished from disturbed land fill. The purpose of the survey was two-fold; (a) to identify soils and their stripping depths for salvaging and suitability prior to additional disturbance and (b) to determine the amount of topsoil available for final reclamation.

Most of the disturbance at Savage Coal Terminal occurred prior to enactment of P.L. 95-87 or the Utah Interim Program that established regulations for salvaging topsoil. Soil disturbance is displayed on the Soils Map, Plate 2-1, where areas mapped as disturbed land fill constitutes roads and areas for which no topsoil was salvaged.

The current plans are to disturb additional land only as it becomes necessary for coal storage. Areas that may be disturbed are presented on Plate 5-1. Prior to disturbance, suitable topsoil and subsoil will be stripped and stored in their respective piles until needed for permanent reclamation.

Due to the fact that topsoil was not salvaged for areas disturbed prior to the reclamation laws adopted in 1978, it becomes necessary to evaluate a substitute material for final reclamation. The chemical and physical analysis from the disturbed land fill indicated the material has a poor rating as topsoil material (see Chapter 2, Soil Resources). However, since no other topsoil materials exist in the immediate vicinity of disturbance, Savage Services Corporation proposed the use of disturbed land fill as a substitute for topsoil in final reclamation (see Chapter 2 for justification).

Control Measures to Mitigate Impact to Soil Resources

Disturbed areas will be protected to prevent excessive erosion of soils on disturbed sites. These areas include pond embankments, diversions, soil piles, and selected areas no longer used for everyday operations.

Protection of Vegetative Resources

A reclamation plan has been designated which will establish on all areas disturbed by surface operations and facilities a diverse, effective and permanent vegetative cover which will be capable for supporting the uses which the land was capable for supporting before mining. This plan is fully described in Section 540.

Areas to be planted will be "roughened" by tilling (or other means) to help hold the seeds in place. The seed mixtures, found on Tables 5-1, 5-2 and 5-3 will be spread either by drill seeder or hydroseeder. Mulch will then be applied at a rate of 2,000 pounds per acre either by machine crimping with a disc or stabilization onto the surface with a tackifier. The revegetated area will be monitored and if success appears unlikely, alterations will be made until revegetation is successful.

All disturbed lands, will be seeded or planted to achieve a permanent vegetative cover of the same seasonal variety native to the area of disturbed land.

Mitigating Measures to be Employed to Reduce Impacts on Vegetative Resources

Vegetation resources will be disturbed only as necessary for additional storage area. Surface disturbance will be conducted immediately prior to the need for additional area. Upon completion, all disturbed areas will be reclaimed to return vegetation to these areas as described in Section 540.

Monitoring Procedures - Reference Areas, and Revegetation

The reference areas have been established at the Savage Coal Terminal.

The location of the reference areas are shown on Plates 5-2 and 3-1.

The shadscale (or upland) reference area is 2.0 acres in size. It is located within and adjacent to the southwest corner of the permit boundary. The reference area represents the shadscale phase of the salt desert community, which is the typical upland vegetation at Savage Coal Terminal.

A second reference area has been established to represent the lowland areas of the site. This reference area is located in the undisturbed area north of the No. 1 Truck Dump.

The upland reference area is fenced, since it is located near the county road, and outside the main property gates. The lowland area is not fenced; however, corners are marked, and it is located in an undisturbed and controlled access area of the site.

Details on reference areas can be found in Section R645-301-321.100.

Protection of Fish and Wildlife

As an initial part of the fish and wildlife study, open file data and wildlife range maps available from the DWR Regional Office in Price, Utah were reviewed. Study methods were discussed informally with the DWR in Price, Utah, in September, 1980. The final reclamation seed mixture will consist of species that are adapted to onsite conditions and are of known value to wildlife for cover, forage, or both.

Potential Impacts on Fish and Wildlife

As discussed in Chapter 3, the Savage Coal Terminal contains limited wildlife habitat. The wildlife that does occur on the site consist mainly of small mammals and songbirds. These species appear to be unaffected by on-going operations as compared to larger species of birds and mammals that are more furtive in nature. At the time of decommissioning it is most likely that wildlife inhabiting the surrounding areas will quickly re-inhabit Savage Coal Terminal.

Mitigation and Management Plans

Since Savage Coal Terminal is an existing operation, wildlife management measures have been designed to prevent additional impacts from continuing operations. This will be achieved in the following ways:

(1) Limiting the amount of disturbance to what is necessary for on-going operations and refuse disposal.

(2) Preventing hunting or harassment of wildlife in the permit area.

(3) "Employee awareness" programs will specifically inform mine personnel of especially sensitive periods (e.g., the nesting of raptors, snake dens, etc.).

These policies will enhance wildlife usage of the site during operations and help facilitate the rapid return of the site to wildlife habitat after decommissioning.

Protection of Air Quality

The air quality at Savage Coal Terminal will be protected through implementation of control devices such as covered conveyors, water sprays to minimize wind erosion from coal piles and dust in reclaim tunnels, water trucks and chemical dust suppressants to control emissions from unpaved roads and coal piles, silo enclosures, and vibrating feeders for the pile load-in area.

Projected Impacts of Mining Operation on Air Quality

Impacts from dust emissions at Savage Coal Terminal will be localized close to the source of emission. Most of the emissions are anticipated to be composed of large-sized particles grater than 10 micrometers, which settle out within a half mile of the emission source. The large particles do not produce any health effects since they are not inhalable or respirable. Since most light scattering is caused by micron-sized particles, little impact on visibility is anticipated from dust emissions from the Savage Coal Terminal processing facilities. Most of the air quality impact from facility emissions, if any, will be generally confined to the plant site.

Mitigating Measures to be Employed to Control Air Pollutants

Since emissions from unpaved roads compose the largest source of particulate emissions at Savage Coal Terminal, paving, adequate watering of the road surfaces, proper road application of chemical dust suppressants on an as needed basis, and vehicular speed controls are appropriate mitigation measures to be employed.

Air Quality Monitoring Plan

Particulate matter is the only air pollutant which might degrade air quality at the plant site. The particulate matter is predominantly fugitive dust. Increases in concentrations of other pollutants such as sulfur dioxide, nitrogen oxides, carbon monoxide, and photochemical oxidants are insignificant.

No air monitoring program is currently planned for the Savage Coal Terminal facility. The plant is considered to be a minor air pollution source by the Utah Bureau of Air Quality and no air monitoring has been required. Particulate emissions at the plant site are minor and are estimated to be less than 30 ton/year. Sources of this magnitude are generally considered insignificant by air regulatory agencies. Secondly, fugitive dusts from materials handling are predominantly large particles (greater than 10-30 um) which fall out rapidly due to gravitational settling. These dust particles will not impact air quality to any great degree at distances greater than one-half mile from a source.

Refuse Stability

Refuse piles are inspected regularly under MSHA requirements and construction procedures assure the long-term stability of the piles (see Section 536). No adverse impacts to human safety or environmental quality are foreseen. Should a slide occur which may have a potential adverse effect on public, property, health, safety or the environment, the company shall notify the Division immediately and comply with remedial measures required by the Division.

Waste Disposal Plans

Two (2) septic tank/drainfields serve the preparation plant and the office/shop/warehouse. All necessary county and state permits have been obtained for operation of these facilities.

511.300. Reclamation.

Complete reclamation plans are discussed under Section 540.

512. Certification.

512.100. All required maps in this plan have been prepared by, or under the direction of, and certified by a qualified, registered, professional engineer in the State of Utah.

512.110. N/A - This is a surface operation.

512.120. Surface Facilities and operations maps are certified.

512.130. Surface configuration maps are certified.

512.140. Hydrology maps are certified (see Chapter 7).

512.150. Geologic maps are certified (see Chapter 6).

512.200. Refuse pile, impoundments and primary road designs are certified.

512.210. N/A - There are no excess spoil plans for this site.

512.220. N/A - There are no durable rock fills planned for this site.

512.230. The refuse pile design is certified by a professional engineer experienced in such designs.

512.240. Impoundment designs use current, prudent engineering practices, and are certified by an experienced professional engineer according to R645-301-743.

512.250. Design and construction of primary roads are certified as meeting the requirements of R645-301-534.200 and R645-301-742.420.

512.260. The only variance from approximate original contour is the permanent refuse pile. Designs for this pile are certified.

513. Compliance With MSHA Regulations and MSHA Approvals.

513.100. N/A - There are no coal processing waste dams or embankments proposed for this site.

513.200. N/A - There are no impoundments or sedimentation ponds meeting the size of other qualifying criteria of MSHA, 30 CFR 77.216 (a).

513.300. N/A - There are no underground workings at this site.

513.400. Refuse piles have been designed and constructed to meet the requirements of MSHA, 30 CFR 77.214 and 30 CFR 77.215. MSHA has issued approvals and I.D. numbers for all refuse areas.

513.500. N/A - This is a surface operation.

513.600. N/A - There are no underground mines at this site.

513.700. N/A - This is not a surface mining operation.

513.800. A plan for extinguishing coal mine waste (refuse pile) fires is discussed in Section 536.

514. Inspections.

All required inspections, except quarterly impoundment inspections, are conducted by a qualified, registered professional engineer or other qualified professional specialist under the direction of the professional engineer.

514.100. N/A - There are 2 topsoil piles and one refuse pile at Savage Coal Terminal. Each of these piles were constructed and inspected under the direction of a professional engineer, and are presently stable. The soil piles are temporary, and will be removed upon reclamation. The refuse pile is permanent, and has been and continues to be, inspected on a regular, quarterly basis. It should be noted that the refuse pile has been approved for removal for waste utilization; however, only a portion of the pile has been removed at this time. None of these piles meet the definition of Excess Spoil.

514.110. N/A - These piles do not meet the definition of Excess Spoil.

514.120. Refuse pile inspections are certified and made available to MSHA and the Division on a quarterly basis. These reports include appearances of instability, structural weakness and other hazardous conditions.

514.130. N/A - No drainage system or protective filter reports are required.

514.200. The refuse pile has been, and continues to be, inspected by a registered, professional engineer. See Figure 5-1 for Inspection Form.

514.210. The refuse pile is active; however, it receives only minor amounts of material from periodic ditch, culvert and sediment pond cleaning. Inspections are conducted on a quarterly basis.

514.220. Inspections are conducted on the refuse pile on a quarterly basis, whether any new material has been added, or not.

514.221. Although this is on the Inspection Form, no new foundation preparation is necessary for this existing pile.

514.222. N/A - There are no underdrains or protective filter systems associated with this pile.

514.223. Surface drainage controls are inspected quarterly.

514.224. N/A- The pile has not reached final configuration.

514.230. Refuse pile inspection reports are made available to MSHA and the Division promptly after each inspection. These reports include appearances of instability, structural weakness and other hazardous conditions.

514.240. N/A - There are no underdrains or protective filters associated with this pile.

514.250. A copy of each refuse pile inspection report is retained at Savage Coal Terminal.

514.300. There are a total of 9 impoundments at this site. Five are considered sedimentation ponds and 4 are settling ponds for the plant.

514.310. All impoundments are inspected on a quarterly basis by a professional engineer or specialist experienced in the construction of impoundments. Impoundments are also inspected and certified on an annual basis by a professional engineer.

514.311. Impoundments are inspected quarterly and certified on an annual basis. This will continue until removal of the structure or release of the performance bond.

514.312. Annual certified reports are submitted to the Division with the Annual Report for the Coal Terminal, as required. These reports include discussion of appearances of instability, structural weakness or other hazardous conditions, depth and elevation of impounded water, existing storage capacity, existing or required monitoring procedures and instrumentation and any other aspects of the structure affecting stability, such as erosion and inlet/outlet conditions.

514.313. A copy of all impoundments inspection reports are retained at Savage Coal Terminal.

514.320. N/A - There are no impoundments subject to MSHA, 30 CFR 77.216, at this site.

514.330. As indicated above, all impoundments are inspected at least quarterly by a professional engineer or qualified person.

515. Reporting and Emergency Procedures.

515.100. The Savage Coal Terminal is located on relatively flat land (less than 5% slope) and very little potential exists for a slide; however, in the event of such an occurrence, the following procedure would be followed:

"At any time a slide occurs which may have a potential adverse effect on public, property, health, safety or the environment, Savage Services Corporation will notify the Division by the fastest available means and comply with any remedial measures required by the Division."

515.200. All impoundments at Savage Coal Terminal are incised, and present little, if any, hazard; however, if a potential impoundment hazard is discovered, the following procedure will be followed:

"If any examination or inspection discloses that a potential hazard exists, the person who examined the impoundment will promptly inform the Division of the finding and of the emergency procedures formulated for public protection and remedial action." Emergency procedures and remedial action will be discussed with Savage Coal Terminal supervisors, and a course of action determined at that time. If adequate procedures cannot be formulated or implemented, the Division will be notified immediately.

515.300. See 515.322 for procedures to be employed during a temporary cessation.

515.310. It is understood that Savage Services Corporation has an obligation to comply with provisions of the approved permit during temporary cessation.

515.311. N/A - This is a surface operation.

515.312. All surface facilities will be secured during a temporary cessation.

515.320. See Section 515.322.

515.321. N/A - This is a surface operation.

515.322. Whenever it is known that operations are to be temporarily ceased for more than 30 days, Savage Services Corporation shall submit to the Division a notice of intention to cease or abandon the operations, in accordance with R645-301-575.300 and to MSHA standards.

This notice will describe mitigation measures to be employed in accordance with the terms and conditions of the permit approval, such as a statement of the number of surface acres involved in the cessation, extent of sub-surface strata, prior reclamation efforts accomplished on the property, and identification of all backfilling, regrading, revegetation, environmental monitoring, underground opening closures and water treatment activities that will continue during the temporary cessation.

516. N/A - This is not a Surface Mining Operation.

520. Operation Plan.

521. The Savage Coal Terminal receives, processes, stores and ships coal from various coal mines in the area. In general, coal is brought in by truck and dumped through 1 of 5 separate truck dump locations. The coal is then screened and/or crushed, washed if required, and conveyed into specific storage areas. When ordered, specific coal is withdrawn from the pile and loaded into the silo by conveyor. The coal is then loaded into a unit train at the silo, and shipped to the desired location.

The Savage Coal Terminal is operated under an approved Mining and Reclamation Plan, and has an excellent history of compliance with that plan and the R645 Regulation.

521.110. Previously Mined Areas.

521.110. This is a surface operation. Original disturbance on the site occurred in 1975 under Utah Power & Light ownership. The site was expanded under Swisher Coal Co. between October 1977 and April 1978. Some additional disturbed area was added after the Arco Coal Co. purchase in 1980.

Previous and present disturbance on the area are shown on Plate 5-1.

521.111. N/A - Surface operation.

521.112. This is not a surface mine; however, the extent of surface disturbance is shown on Plate 5-1.

521.120. Existing surface and subsurface facilities are shown on Plate 5-2.

521.121. See Plate 5-2.

521.122. See Plate 5-2.

521.123. See Plate 5-2.

521.124. See Plate 5-2 and 5-6.

521.125. See Plate 5-2 and 7-3.

521.130. Landowner and Right of Entry and Public Interest Maps are on Plate 1-1.

521.131. See Plate 1-1.

521.132. See Plate 1-1.

521.133. N/A - There are no operations within 100 feet of the right-of-way line of a public road, and there are no plans to relocate a public road.

521.140. Mine Maps and Permit Area Maps

521.141. See Plate 5-2.

521.142. N/A - This is a surface operation.

521.143. See Plate 5-2 and Section R645-301-536.

521.150. Land Surface configuration is shown on Plates 5-1 and 5-2.

521.151. See Plate 5-1. Pertinent maps are prepared and certified according to R645-301-512.

521.160. Maps and Cross Sections of the Proposed Features for the Proposed Permit Area are shown on Plate 5-2.

521.161. See Plate 5-2.

521.162. See Plate 5-2.

521.163. See Plate 5-2.

521.164. See Plate 5-2.

521.165. See Plate 5-2.

521.166. See Plate 5-2.

521.167. N/A - No explosive storage or holding at this site.

521.168. N/A - No air pollution collection or control facility.

521.169. N/A - No coal processing waste bank.

521.170. Transportation Facilities Maps are on Plate 5-2 and described in Section 511.100.

521.180. Support Facilities are shown on Plate 5-2.

521.190. Other relevant information requested by Division:

Permitted Acres	-	153.46 ac.
Disturbed Acres	-	132.50 ac.
Pre-Law Disturbance	-	77.20 ac.
Post-Law Disturbance	-	55.30 ac.
Ownership (Surface)	-	All Private

521.200. Signs and Markers.

All signs and markers will:

521.210. Be posted, maintained and removed by Savage Services Corporation;

521.220. Be of a uniform design that can be easily seen and read; be made of durable material; and conform to local laws and regulations;

521.230. Be maintained during all activities to which they pertain.

521.240. A typical mine identification sign is shown on Figure 5-1.

521.241. N/A - This is a surface operation.

521.242. Identification signs are placed at each point of access to the permit area from public roads. (See Plate 5-2).

521.243. See Figure 5-1.

521.244. Identification signs will be retained and maintained until after the release of all bonds for the permit area.

521.250. A typical perimeter marker is shown on Figure 5-2.

521.251. N/A - This is a surface operation.

521.252. The perimeter of the permit area is clearly marked. (See Plate 5-2).
Perimeter signs and markers are placed around the permit boundaries as required.

521.260. N/A - There are no buffer zones associated with this operation.

521.261. N/A

521.262. N/A

521.270. A typical topsoil marker is shown on Figure 5-2.
All topsoil and subsoil piles are clearly marked with the signs.

522. N/A - This is a surface preparation and shipping facility.

523. N/A - No mining takes place at this operation.

523.100. N/A - There are no operations proposed within 500 feet of an underground mine.

523.200. N/A

523.210. N/A

523.220. N/A

524. N/A - There are no plans for blasting or explosives at this facility during the life of operation. Any blasting during reclamation activities will be performed by licensed, certified contractors and in accordance with local, state and federal regulations.

525. N/A - This is a surface preparation and shipping operation. No underground mining takes place here.

526. Plant facilities are described under Section 511.100 and 511.200. Reclamation is described in Section 550.

526.100. Mine Structures and Facilities.

526.110. The following is a list of structures that were constructed on the site prior to January 21, 1981:

Structure	Construction Begun	Construction Completed
Preparation Plant	10/77	12/78
Conveyors	10/77	4/78
Silo/Loadout	10/77	4/78
Shop/Lab/Warehouse	3/80	6/80
Power Line/Substation	10/77	4/78
Pumphouse	8/78	10/78
Scales/Scalehouse	2/78	4/78
Refuse Pile	12/78	On-Going
Railroad Loop	10/77	4/78
Roads/Parking Areas	10/77	4/78
Water System	10/77	10/78
Sewage System	3/80	5/80
Diversion Ditches	6/78	6/79
Sedimentation Ponds	6/78	6/79

526.111. See Plate 5-2.

526.112. See Plates 5-2 thru 5-5, 5-7, 5-8 and Plates 7-3 thru 7-6.

526.113. All of the above structures were in use at the time of the original permit application, and are still in use at this time. The structures were constructed, and have been maintained to meet the requirements of R645-301. This is evidenced by the fact that they have been reviewed, inspected and approved in the original and all subsequent permit renewals.

526.114. See Section 526.100.

526.115. N/A - There are no plans to modify or reconstruct any facilities at this time.

526.116. N/A - There are no plans to conduct operations within 100 feet of the right of way line of a public road or to relocate a public road.

526.200. Utility Installation and Support Facilities.

The majority of utility and support facilities for this operation were installed 20 - 30 years ago, and have been reviewed and approved by relevant agencies whenever required. See Section 511.100.

526.210. "All operations will be conducted in a manner which minimizes damage, destruction, or disruption of services provided by oil, gas, and water wells; oil, gas, and coal-slurry pipelines, railroads; electric and telephone lines; and water and sewage lines which pass over, under, or through the permit area, unless otherwise approved by the owner of those facilities and the Division.

526.220. Support facilities are operated in accordance with the permit issued for this facility, and in a manner which:

526.221. Prevents or controls erosion and siltation, water pollution, and damage to public or private property; and

526.222. To the extent possible using the best technology currently available - minimizes damage to fish, wildlife, and related environmental values; and minimizes additional contributions of suspended solids to streamflow or runoff outside the permit area. Any such contributions will not be in excess of limitations of Utah or Federal law;

526.300. Water pollution control facilities are described in Chapter 7 (Section R645.700) of this Permit.

526.400. See Section 511.200.

527. Transportation Facilities are described under Section 511.100.

527.100. See Section 511.100.

527.110. See Section 511.100.

527.120. See Section 511.100.

527.130. See Section 511.100.

527.200. See Section 511.100.

527.210. See Section 511.100.

527.220. See Section 511.100.

527.230. See Section 511.100.

527.240. If a road is damaged by a catastrophic event, such as a flood or earthquake, the road will be repaired as soon as practical after the damage has occurred.

527.250. N/A - No alternative specifications or steep cut slopes are planned for this operation.

528. See Sections 511.100 and 536 for details on coal and refuse handling.

528.100. See Section 511.100.

528.200. N/A - This is not a mining operation.

528.300. See Section 536.

528.310. N/A - No excess spoil is generated.

528.320. See Section 536.

528.321. N/A - There are no plans to return coal processing waste to underground workings.

528.322. See Section 536.

528.323. See Section 536 for complete fire fighting plans.

528.330. Handling and disposal of non-coal mine waste is discussed under Section 511.100.

528.331. See Section 511.100.

528.332. See Section 511.100.

528.333. See Section 536.

528.334. Any non-coal mine waste defined as "hazardous" under 3001 of the Resource Conservation and Recovery Act (RCRA) (Pub.L. 94-580, as amended) and 40 CFR Part 261 will be handled in accordance with the requirements of Subtitle C of RCRA and any implementing regulations.

528.340. See Section 536.

528.350. See Section 536.

528.400. Dams, embankments and other impoundments are discussed in Section 511.100 and in Chapter 7 (R645-301-700).

529. N/A - This is a surface operation.

530. Operational Design Criteria and Plans.

531. Operational designs and plans are discussed under Sections 511.100, 536 and Chapter 7 (R645-301-700).

532. Complete designs for sediment control are discussed in Chapter 7 (R645-301-700).

532.100. See Chapter 7.

532.200. See Chapter 7.

533. Complete designs for impoundments are discussed in Chapter 7 (R645-301-700).

533.100. There are no impoundments meeting the size or other criteria of 30CFR 77.216(a), or located where failure would be expected to cause loss of life or serious property damage. All impoundments at this site are incised.

533.200. See Chapter 7.

533.210. See Chapter 7.

533.220. See Chapter 7.

533.300. See Chapter 7.

533.400. See Chapter 7.

533.500. See Chapter 7.

533.600. N/A

533.610. N/A

533.620. N/A

533.700. See Chapter 7 (R645-301-700).

534. Roads are discussed under Section 511.100.

534.100. See Section 511.100.

534.200. See Section 511.100.

534.300. See Section 511.100.

535. N/A - This is a surface preparation and shipping facility. No spoil is generated at this site.

536. The refuse pile at Savage Coal Terminal is composed primarily of coal processing waste generated prior to 1984; however, a small percentage of the pile is made up of coal mine waste generated by the operations prior to ownership by Savage Services Corporation.

The primary use of the refuse pile at this time is for disposal of sediment from the cleanout of ponds, ditches and culverts.

The main refuse disposal area is approved to be removed and burned in the Sunnyside Cogeneration Power Plant, starting in the fall of 2000. The pile has been surveyed and found to contain approximately 684,000 cubic yards of material. As of 2007, only a relatively small amount of material has been removed from the east and west ends of the pile. The power plant has been utilizing waste material from another site; however, it is still anticipated that the Savage Coal Terminal refuse will be used in the future.

An alternative proposal has been made and approved to use the refuse as a B.T.U. resource recovery material. This is simply another form of waste utilization for the refuse, and provides Savage Services Corporation with an alternate method of removing the refuse pile and having it used beneficially. The details of the B.T.U. resource recovery plan are provided in Appendix 5-2. This plan is not intended to replace or supercede the original plan for the refuse pile removal, but merely to supplement the original plan. Having an additional or alternate plan will help ensure that the refuse is removed and used in an approved and beneficial manner.

The material will be removed over a period of 3-4 years, and the area will be utilized as a coal storage area through the operational life of the facility. When the area is no longer required for the operation, it will be reclaimed according to the approved plan.

Details on the refuse pile and plan for removal are found in Appendices 5-1 and 5-2 of this plan.

Although the pile is being removed periodically, it is still considered active since ditch, culvert and sediment pond cleanout material as well as other site cleanup material are disposed of in the pile. The following is the approved Coal Processing Waste Disposal Plan for this site.

Coal Processing Waste Disposal

Coal processing waste at Savage Coal Terminal was truck hauled from the preparation plant to the designated disposal site within the permit area. The design, construction and maintenance of the waste bank is under the supervision of a registered professional engineer. The refuse pile is approved by MSHA, and marked with an identification sign as shown in Figure 5-1.

The coal processing waste is the reject from the washing cycle used to clean and upgrade the coal from the Beaver Creek Coal Company mines in the Carbon-Emery County area. Coal was washed from the Gordon Creek #2 Mine (Castle Gate "A" Seam), Gordon Creek #3 Mine (Hiawatha Seam), and Huntington Canyon #4 Mine (Blind Canyon Seam). All of the seams were low-sulfur (0.5% to 0.8%). The reject is also low-sulfur, non-acid, and non-toxic. The attached analyses show the typical quality of the coal and the refuse product (Figure 5-3 and 5-4).

The wash plant has been idle since 1984; however, it was restarted during the fall of 2006. Equipment was replaced or upgraded within the plant as required. The coal to be washed under this restart plan is owned by another company, and the refuse generated by the washing cycle will be disposed of in their refuse pile.

At the present time, no coal processing waste is being deposited on the refuse pile from the plant. Materials from ditch and pond cleaning are periodically placed on the refuse pile.

The texture of the refuse material has been classified as "coarse", as indicated by the following typical screen analysis:

+4	-	5%
4" x 2"	-	5%
2" x 3/4"	-	15%
3/4" x 1/4"	-	20%
1/4" x 28m	-	25%
28m x 0	-	30%

Additional refuse analyses are provided in Appendices 5-1 and 5-2.

Based on the analyses, there is no apparent reason that the toxicity of the refuse product should change; however, if water analysis in the area should indicate a change in pH or other possible toxic levels after the refuse has weathered, additional sampling will be performed to check for acid-toxic levels in the refuse.

If the tests show an acid or toxic forming potential, the disposal material will be covered with 4 feet of non-acid, non-toxic material.

Site Inspection

The refuse banks are inspected under the supervision of a qualified registered engineer at least quarterly; this will continue until the bank has been graded, covered, and reseeded. Inspections include observations of any potential safety hazards, to assure that organic material and topsoil is removed before deposition and that construction and maintenance are being performed in accordance with the design plan.

If such inspection discloses a potential hazard, the inspector will immediately notify the regulatory authority of the hazard and the emergency procedures to be implemented.

Copies of the inspection findings are maintained and available for review on site.

Water Control Measures

The surface drainage from the refuse pile is carried by collection ditches sized to convey runoff from a 100 year-6 hour event, and deposited into a sediment pond (#5) downslope. The overflow (if any) from this pond is conveyed through an additional collection ditch to a final filtering pond and discharged into the same underground sump to be recirculated through the plant as washdown, sprinkler and roadway water. Slope protection is provided at the face of the refuse bank through the use of grading and berms along the top. Upon completion, the bank will be graded, covered with suitable plant growth material and revegetated. All earthlined collection and diversion ditches will be revegetated upon completion of construction.

The completed refuse pile is not designed to purposely impound water, but rather to drain the top and side slopes to properly sized structures which convey runoff to Pond 5; however, during the course of pile construction, minor undulations may exist temporarily due to the large surface area of the pile and the periodic nature of material deposition without the consistent import from the wash plant. These areas may impound small amounts of water for short periods of time.

The pile is regraded on a regular basis, and any such undulations will be graded out at least quarterly. The overall slope on the refuse pile will be maintained to provide positive drainage as shown in the plan.

Protection of water resources is accomplished through the use of sedimentation and filtering ponds and a system designed for no discharge from the permit area within a 10 year - 24 hour precipitation event.

Construction Requirements. The following is a general refuse disposal procedure employed at this site:

Preparation

(1) Remove vegetation and topsoil and place in uncompacted lifts of 2 feet or less on designated storage area.

(2) Remove lower soil to a depth as allowed by as ground conditions. This material will also be place in uncompacted lifts of 24 inches or less in a designated storage area.

Dumping

1. Refuse should be dumped on the extreme perimeter of the prepared area. Truckloads dumped should have three to five feet clearance from previous loads to allow spreading. Refuse will not be dumped beyond the perimeter or upon any unprepared area.

2. Continue dumping around perimeter until filled:

   a. If using more than one area, proceed to next prepared area and repeat above dumping procedure.

   b. If only using one large area begin dumping back at original point or as near as possible to this point.

Spreading and Compaction

1. Refuse piles should be knocked down and spread as soon as practical. Spread the refuse as thinly as possible to allow for more efficient drying. Moisture should be at 10% to 12% for effective compaction. The entire previously compacted pile area or prepared area may be used for drying if necessary.

2. Compaction should take place during spreading operation if possible. If refuse is too wet to compact, allow for air-drying and then proceed. Compact in layers not to exceed 24 inches, starting at the perimeter and working out. This will allow for the building of the height of the pile in a series of stable lifts. Compaction will be to 90% of maximum dry density. The pile will be graded and maintained in a manner to allow drainage and prevent water impoundment as per the plan on Plate 5-3.

Burning

Proper compaction and maintenance of the waste bank should prevent any combustion from occurring; however, in the event of a fire, the following plan will be followed:

The plant manager will be notified immediately. The operations manager of chief engineer will also be notified.

The plant manager will examine the fire area and determine its severity. He will then confer with the operations manager or chief engineer to determine the extinguishing method to be employed. The manager shall contact the regulatory authority and MSHA to discuss a plan for extinguishing the fire. In lieu of other suggestions or plans, one of the following two methods will be used, depending upon the extent of the fire:

1. Small area of heat or fire: with a small area, it will be best to smother the fire by hauling incombustible earth material only from a previously soil-stripped zone and spreading and compacting the borrow over the burning area to eliminate the air supply.

2. Large area of heat or fire: with an area grater than 100 feet x 100 feet, it will be necessary to begin removal of the burning material. The removed material will be spread in thin layers onto a soil-stripped area for extinguishing. This area will be within that proposed for refuse disposal and pre-stripped as per the plan. Water will be employed only if the spreading material is not sufficient to prevent further burning. Once a fire is extinguished, a layer of incombustible material at least eighteen inches thick will be placed over the burned material and compacted before any further waste deposition takes place over it.

Only the plant manager and operators or others designated by him will be allowed to participate in fire extinguishing procedures. All authorized persons will be familiar with the above techniques prior to working around a fire, and adequate safety measures will be employed to ensure the safety of the fire fighters and the public in general.

Burned Waste Utilization

It is currently not anticipated that any burned coal waste, other minerals, or refuse is to be removed from any disposal area. However, should this become necessary, a plan for removal shall be certified by a qualified engineer and approval obtained from the regulatory authority.

The Office of Surface Mining has completed a stability analyses using the Slope IV computer for worst case conditions at the Savage Coal Terminal which indicates a static safety factor of 1.98 (OSM Review Document, C.V. Spur Application, May 1981 (Figure 5-5). MSHA has reviewed processing waste disposal design and construction specifications and determined that the proposed piles present no safety hazard (Figure 5-6).

Soil Stockpiles

The locations of topsoil stockpile is shown on Plate 5-2. The majority of the material in the main topsoil pile was salvaged from areas shown on Plate 5-1 which were disturbed between May 1978 and December 1981. Additional stripped topsoil was added to the pile in 2002. This material came from the railroad loop area shown on Plate 5-2. It is not anticipated that additional stripping or soil salvaging operations will occur during the new permit term. Stockpiles will be vegetated to minimize wind and water erosion, with all runoff draining into sedimentations ponds.

536.100. See Section 536.

536.110. See Section 536.

536.120. See Section 536.

536.200. See Section 536.

536.210. See Section 536.

536.220. See Section 536.

536.230. See Section 536.

536.300. N/A - No Excess Spoil Fills.

536.400. N/A - No Impounding Structures from Coal Mine Waste.

536.500. Disposal of Coal Mine Waste in Special Areas.

536.510. N/A - No coal mine waste from outside a permit area is planned to be disposed of at this operation.

536.520. N/A - There are no plans to dispose of coal mine waste in underground workings.

536.600. N/A - There are no future plans to dispose of underground development waste at this site.

536.700. N/A - This is a surface operation with no plans to return coal processing waste to underground workings.

536.800. See Section 536. There are no plans for coal processing waste dams.

536.810. See Section 536.

536.820. See Section 536.

536.900. See Section 536.

537. Regraded Slopes.

537.100. N/A - There are no plans for steep cut slopes at this site.

537.200. N/A - This is a surface operation.

540. Reclamation Plan.

541. Contemporaneous Reclamation

At the present time it is not possible to project the life of the Savage Coal Terminal facility, as it may be used indefinitely. Therefore, only inactive refuse disposal areas may be reclaimed as the piles are completed. These areas will be covered with an appropriate amount of plant growth material. Seeding, fertilizing, and mulching will be performed simultaneous with placement of subsoil and topsoil.

541.100 When operations at Savage Coal Terminal are finally terminated, all surface facilities will be removed and the surface area graded (except the refuse disposal sites), topsoiled and revegetated. After revegetation efforts have been completed, all drainage structures, culverts, and diversions will be removed and the areas reclaimed.

Reclamation efforts, including backfilling, grading, topsoil replacement and revegetation shall occur as contemporaneously as practicable.

Seeding and planting will occur immediately after site preparation and during the first normal period of planting conditions.

Soil Removal and Storage

The soil survey conducted in July, 1980 distinguished disturbed soils from undisturbed soil mapping units (See Plate 2-1, Soils Map). Areas mapped as Disturbed Land were areas where the soils, vegetation, both were affected by operations. Disturbance of areas which now occupy roads and surface facility sites occurred prior to enactment of reclamation legislation so no topsoil was salvaged from these areas. However, soils underlying disturbance are considered to be in-place aside from the top several inches of coal fines, and compaction.

The undisturbed soil mapping units will have topsoil removed immediately prior to disturbance based on stripping depths that have been assigned to each soil type. The stripping depths were derived from soil physical and chemical analysis (see Section 8.5). Subsoil is that material which exist between the topsoil and the parent material.

Where chemical analysis substantiates, subsoil will be stripped down to the parent material.

The location of the topsoil piles that currently exist at Savage Coal Terminal are displayed on Plate 5-2. These stockpiles were placed on level ground and revegetated with the temporary seed mixture to reduced wind and water erosion. As additional topsoil and subsoil is placed on the respective stockpiles they are reclaimed contemporaneously with the first suitable growing season.

The present stockpiles are most likely expanded to their maximum size at this time. Materials from the stockpiles will not be moved until needed for final reclamation.

541.200 Final Abandonment

Upon final cessation of operations all surface structures and facilities for the operation will be removed. There are no plans to transfer any wells to other parties. The shallow monitoring wells located within and around the property has been sealed by filling them with cement or other inert sealing material. All salvageable materials will be recovered and removed for sale or re-use. Non-salvageable materials (concrete, gravel, etc.) will be placed to the extent possible in existing impoundment excavations and low areas as fill prior to final grading and stored on the berms of sedimentation ponds. Remaining material will be taken off site to an approved landfill. The schedule and cost of removal is detailed in Chapter 8.

541.300 N/A - This is a surface operation.

541.400 Disposition of Drill Holes

Thirteen observation (ground water monitoring) wells were drilled at Savage Coal Terminal (formally C.V. Spur) in the period 1980-1982. Nine holes were within the permit area, with an additional four holes drilled on adjacent farmland. By Division approval, all ground water monitoring wells were filled and capped as of July, 1999. Two new water monitoring wells were drilled in 2006. When no longer needed, these wells will also be filled and capped as described above.

Removal of Impoundments and Diversions

All sedimentation ponds and diversion ditches will remain in place until an effective vegetation cover has been reestablished to reduce suspended solids runoff from the affected areas.

The success of the revegetation will be monitored and measured. Once the success of revegetation is determined to be acceptable, all diversions and sedimentation ponds will be filled in first with the concrete rubble and gravel stored on the berms. See Chapter 7 for details of post-mining hydrology.

The berms around the ponds will then be pushed in and compacted to complete the backfilling. The diversions will then be removed by pushing the berms into the ditches.

These areas will then be prepared and planted in accordance with the revegetation plan. The ponds will be removed in numerical order (1, 2, 3, 5, 6); the diversions will be the last to be removed (D-1, D-2) to minimize the risk of a major precipitation event eroding the newly revegetated area.

Removal of Roads/Railroads

The roads required for access to the sedimentation ponds and diversions will be left in place until pond and diversion reclamation is under way. The roads will then be removed and reclaimed in the same manner. There are no plans to leave any roads at this property.

The loop track within the property belongs to Savage Services Corporation, and will be removed upon completion of operations. The spur track is the easternmost track running north-south, and is the property of D & RGW railroad, and will remain in place upon reclamation. The final configuration of the property is shown on Plate 5-6.

Reclamation of River Pump/Pipeline System

The pipeline system consists of 2 PVC pipes laid parallel in a trench approximately 30" wide for a distance of approximately 10,000 feet, from the Savage Coal Terminal pumphouse to the Price River. The lines are a 6" PVC which provides water from the river pump to the Savage Coal Terminal facility, and an 8" PVC line for discharge of ground water from the Savage Coal Terminal French Drain to the Price River. The river pump facility consists of a 6' diameter, perforated C.M.P. culvert placed vertically in a hole approximately 30' deep, and 20' wide, surrounded by drain rock to allow entry of water into the pipe. A concrete base and steel grating cover the pipe. A deep-well pump is mounted over the well and hooked to the 6" pipeline to the plant. A steel hinged building covers the well and pump for protection.

During reclamation, the pipelines will be removed and the area reclaimed according to the plan. The pumphouse, pump, grating, and 6' CMP well will be removed. The concrete will be broken up and dozed into the well hole, and the remainder of the hole will be filled in with existing material on site (originally taken from the hole). The pumphouse and pipeline area will be regraded to original contour and reseeded according to the plan, using the seed mix described in Table 5-4. The pumphouse area is a natural low spot, therefore, the reclamation will be in a small, non-draining area and no silt fence or additional runoff controls should be required. Sediment controls on the reclaimed pipeline area will be provided only if deemed necessary. The area is designated a Small Exemption Area with no required sediment control based on a Sed-Cad analysis.

The river pump/pipeline system is shown on Plates 5-7 and 5-8.

542 Narratives, Maps and Plans

542.100 Schedule of Reclamation

Upon completion of operations, the following approximate schedule will be followed for final reclamation. Time frames are approximated and may overlap, decreasing the overall time. The sequence of events may also be slightly altered. This procedure will begin within 180 days of termination of operations.

Procedure, Time Frame, Accumulative Time

Procedure	Time Frame	Accumulative Time	Time of Year
Remove Structures	44 Weeks	44 Weeks	Spring-Spring
Regrade Areas	18 Weeks	62 Weeks	Summer - Fall
Topsoil and Soil Placement	2 Weeks	64 Weeks	Fall - Winter
Seeding & Mulching	2 Weeks	68 Weeks	Winter (after 10/15)

* Removal of Sediment Ponds and Diversions 2 Weeks
* To be completed after the revegetation cover meets the standards described in Section 3.5.3.1.

Cost of Reclamation

Estimates of the cost of reclamation are detailed in Chapter 8, Appendix 8-1.

542.200 Backfilling and Grading Plans

With the termination of Savage Coal Terminal operations, the surface area will be graded, except refuse disposal sites. The post-mining topography and drainage for the refuse disposal areas is shown on Plate 5-6. Cross-sections of the reclaimed refuse disposal areas are shown on Plate 5-3. For the most part, reclamation backfilling and grading will be minimal since no overburden will be removed.

Areas to be backfilled will consist of the 5 ponds, diversions, and any other depressions that will act to trap water. In each case, the material to be used for backfilling is either stored adjacent to the structure in the form of berms or dams, or will be placed there prior to the backfilling (i.e. - concrete to be placed in the ponds). The entire disturbed area will be graded to the necessary degree to reach the configuration shown on Plate 5-6, Post Mining Topography and Drainage.

Recontouring

All final grading, preparation and placement of topsoil (where applicable) will be done along the contour to minimize subsequent erosion and instability.

Rills or gullies deeper than 9 inches in regraded areas will be filled, graded or otherwise stabilized and reseeded.

The proposed final configuration of this area is shown on Plate 5-6. This final recontouring is compatible with the surrounding terrain and the post-mining land use.

Terracing and Erosion Control

As a part of the final reclamation work, native hay will be placed on the side slope of the refuse disposal piles and crimped into the soil. Other organic mulches will be used with a tackifier on steeper slope areas where native hay cannot be crimped into the soil.

Soil Redistribution and Stabilization

On pre-law disturbed areas (see Plate 5-1) the disturbed land fill will be used as a seedbed material. Any material which has been contaminated by more than 50% coal or coal refuse will be removed. Areas with excessive rock (more than 50% or rocks greater than 12" diameter will not be utilized as a soil substitute but will be salvaged to be employed as rip-rap. The balance of the material will be ripped at a depth of 14" to 18" utilizing a D-6 or the equivalent crawler tractor on approximately 18" center to center spacing.

Note: The 50% coal contamination will be determined visually; however, if such areas are left, they will have coal % verified by laboratory analyses. Contaminated material will be disposed of on site.

Post law disturbed areas will have an average of 6" of topsoil respread onto the area. This material as well as the disturbed land fill will be scarified (disced or tilled) in areas of less than 20% slopes to reduce clodiness. On steeper areas (greater than 20% slopes), the area will be surface roughened by placement of gouges approximately 30" in diameter by 12" - 18" deep and 2' - 3' apart. Based on knowledge gained from topsoil stockpiles the surface roughening for water harvesting and seeding immediately after topsoil placement appears to be the best technology for establishing vegetation on these areas.

The redistributed topsoil will be random sampled on a basis of 1 composite sample per acre. The sample sites will be randomly located on a grid of the reclaimed area by numbering each grid from 1 to 100/acre and selecting numbers to sample from a random number table. The sites will be located on the ground and a 4" soil auger will be utilized to extract a 4" to 6" core of surface material for laboratory analyses. The sample will be labeled as to its location and shipped to a certified lab to be analyzed as to those parameters the regulatory agency requires at the time of reclamation.

Revegetation Plan

Soil Preparation

Prior to seeding soil samples will be taken from all areas to be reclaimed to determine appropriate fertilizer types and application rates from the soil analysis.

Seeding and Transplanting

Areas which have been disturbed during mining will be reseeded with either native species or a mixture of native and introduced species. Mixtures containing introduced species may be more efficient in establishing ground cover for preventing erosion and protecting topsoil since some may grow faster and produce cover more quickly than native species.

Presently, Savage Services Corporation has been granted permission to use the Seed Mixture in Table 5-1. This mixture contains some introduced species that the company feels may be valuable for reclamation of the site. By studying the effects of specific introduced and native species planted together on Savage Coal Terminal during temporary reclamation, the company will be able to design a permanent reclamation seed mixture most compatible with the site. At the present time, the permanent reclamation seed mixture consists of the species and rates found in Tables 5-2 and 5-3 for the upland and lowland areas, respectively. The mix in Table 5-4 will be used to revegetate the disturbed area on the Price River pipeline system. The revegetation plan for the Price River Well area also includes the planting of Sandbar Willows at a density of 150 per acre (to a distance of 200 feet from the river).

In most cases the post-mining topography will be gentle enough to drill seed along the contour. On steeper areas (greater than 4:1), a combination of hydroseeding and broadcast seeding will be utilized. Hydroseeding and broadcast seeding will be applied at twice the rate of drill seeding. Areas to be hydroseeded are shown on Plate 5-6, all other areas are to be drill seeded.

Seeding will take place as soon as practical after placement of topsoil and scarification or roughening. Success of the revegetation program will be determined by comparing the percent ground cover and shrub density on the reclaimed area with that on the reference areas described in Chapter 3. Success standards will be those required by the Division.

Establishment of acceptable shrub densities may be achieved either through the use of seed or by planting bare root or containerized seedlings.

Mulching

To protect newly reclaimed areas against erosion, drying, and frost heave, planted areas will be mulched following seeding. The type of mulch and method of application will vary depending on slope conditions.

On 3:1 slopes or less, wood fiber or hay mulch will be used. The application rate will be 1 ton per acre. Seed will be inspected by the State Department of Agriculture prior to use.

Slopes steeper than 3:1 will be hydromulched using wood fiber mulches or other commercial mulches at a rate of 2,000 pounds per acre which have been proven successful on other areas. Tackifiers will also be used at a rate of 120 pounds/acre on all areas hydroseeded to keep mulch in place. Hydromulch will be applied at a rate of 2000 lbs./acre for slopes between 2:1 and 3:1, and at a rate of 2500 lbs./acre for slopes steeper than 2:1.

Reclamation Management

The reclaimed area will be monitored closely to determine if maintenance is necessary for areas of soil erosion, weed control, pest control, reseeding of small areas and maintenance fertilization.

Soil erosion will be controlled through the use of mulch, chemical stabilizers, or other appropriate techniques. Gullies will be filled and stabilized. During revegetation, activities will be conducted parallel to the contour.

Bare patches of failed planting will be reprepared and planted. Where there is evidence of erosion, additional mulch, jute, or excelsior will be applied as needed to stabilize the area until vegetation can reestablish.

Attempts will be made to control noxious weeds. At present bindweed is present on and adjacent to the site. One year prior to reclamation, an inventory of the area will be conducted with the purpose of locating this noxious weed as well as all others listed on the state and county control program. Carbon County has a cooperative program wherein the county will spray noxious weeds when located, and in cooperation with the local land owners. It is the company's intent to work within the guidelines established by the county to control weeds both prior to and during the reclamation period.

Insect problems will be controlled with insecticides, or other appropriate methods. Savage Industries, Inc. will not use persistent pesticides unless approved by the regulatory authority. Grazing of revegetated areas by domestic livestock and wildlife will be restricted by fencing until vegetation is mature enough to maintain regrowth and control of erosion.

The success of revegetation efforts will be compared with an established reference area as shown on Plate 3-1 and described in Chapter 3. Reclaimed areas will be monitored utilizing methods approved by the division and will meet sample adequacy requirements. Both the reclaimed area and corresponding reference area will be sampled during the 9th and 10th year following reclamation. The monitoring schedule is as follows:

Monitoring Schedule

Year	Qualitative Sampling	Quantitative Sampling
1	X	
2	X	X
3	X	X
4	X	
5	X	X
6	X	
7	X	
8	X	
9	X	X
10	X	X

Schedule of Reclamation

Upon completion of operations at Savage Coal Terminal, the following approximate schedule will be followed for final reclamation. Time frames are approximate and may overlap, decreasing the overall time. The sequence of events may also be slightly altered. This procedure will begin within 180 days of termination of operations.

542.300. Post Mining Topography is shown on Plate 5-6.

542.400. See Section 541.400.

542.500. See Section 542.100.

542.600. See Section 541.400.

542.700. See Section 541.200.

542.710. N/A

542.720. N/A

542.730. N/A

542.740. See Section 541.200.

542.800. See Section 542.100 and Chapter 8.

550. Reclamation Design Criteria and Plans.

Each permit application will include site specific plans that incorporate the following design criteria for reclamation activities.

551. N/A - Surface Operation.

552. N/A - No permanent structures are proposed for this operation.

552.100. See Section 542.200.

552.200. N/A - There are no plans for permanent impoundments.

553. See Section 542.200.

553.100. See Section 542.200.

553.200. N/A - This is a surface processing and shipping operation - no spoil will be generated.

553.250 Refuse Piles.

553.251. See Section 542.200 and Plates 5-3 and 5-6.

553.252. See Section 542.200.

553.260. N/A - There are no plans to dispose of coal processing or underground development waste in mined-out areas.

553.300. See Section 542.200

553.400. N/A - No cut and fill terraces are proposed for reclamation.

553.500. N/A - There are no PMA'S, CMA'S or highwalls associated with this site.

553.700. N/A - This is not a mining operation.

553.800. N/A - This is not a mining operation.

553.900. N/A - Fills are not spoil or underground development waste.

560. Performance Standards.

Coal mining and reclamation operations will be conducted in accordance with the approved permit and requirements of R645-301-510 through R645-301-553.

TABLE 5-1
TEMPORARY RECLAMATION SEED MIXTURE

LIVE SPECIES	POUND OF PURE SEED/ACRE*
SHRUBS:	
Atriplex corrugata (Mat saltbush)	2.0
Atriplex gardneri var. cuneata (Castle valley clover)	2.0
Ceratoides lanata (Winterfat)	2.0
Atriplex canescens (Fourwing saltbush)	2.0
FORBS:	
Sphaeralcea coccinea (Scarlet globemallow)	1.5
GRASSES:	
Stipa hymenoides (Indian ricegrass)	4.0
Bouteloua gracilis (Blue grama)	1.0
Elymus elymoides (Bottlebrush squirreltail)	4.0
Pseudoroegneria spicata (Bluebunch wheatgrass)	7.0
Sporobolus airoides (Alkali sacaton)	0.5
TOTAL:	31.0
* Broadcast or hydroseeded.	
Drill seed at ½ above rates.	

TABLE 5-2
SEED MIX FOR THE SHADSCALE (UPLAND AREAS)

SCIENTIFIC NAME	COMMON NAME	PLS/Acre*	Seeds/Ft^2
SHRUBS			
Atriplex gardneri var. cuneata	Castle Valley saltbush	2.00	5.10
Atriplex confertifolia	Shadscale	4.00	5.88
Chrysothamnus nauseosus	Rubber rabbitbrush	0.30	2.75
Ceratoides lanata	Winterfat	4.00	5.05
FORBS			
Eriogonum inflatum	Desert trumpet	1.00	4.80
Helianthus annuus	Annual sunflower	4.00	5.33
Oenothera caespitosa	Evening primrose	0.30	6.20
Sphaeralcea coccinea	Globemallow	0.50	5.74
GRASSES			
Bouteloua gracilis	Blue grama	0.50	8.16
Elymus lanceolatus	Thickspike wheatgrass	2.00	7.07
Hilaria jamesii	Galleta	2.00	7.30
Sporobolus airoides	Alkali sacaton	0.20	8.03
Stipa comata	Needle-and-thread	3.00	7.92
Stipa hymenoides	Indian ricegrass	2.00	8.63
TOTALS		25.80	87.96

* Based on broadcast seeding methods.

TABLE 5-3
SEED MIX FOR THE GREASEWOOD (LOWLAND AREAS)

SCIENTIFIC NAME	COMMON NAME	PLS/Acre	Seeds/Ft^2
SHRUBS			
Atriplex confertifolia	Fourwing saltbush	4.00	5.88
Atriplex corrugata	Mat saltbush	3.00	4.13
Atriplex gardneri var. cuneata	Castle Valley saltbush	2.00	5.10
Chrysothamnus nauseosus	Rubber rabbitbrush	0.50	4.59
Sarcobatus vermiculatus	Greasewood	0.50	3.28
FORBS			
Eriogonum inflatum	Desert trumpet	1.00	4.80
Helianthus annuus	Annual sunflower	4.00	5.33
Oenothera caespitosa	Evening primrose	0.30	6.20
Sphaeralcea coccinea	Globemallow	0.50	5.74
GRASSES			
Bouteloua gracilis	Blue grama	0.30	4.90
Distichlis spicata	Saltgrass	0.50	5.97
Elymus cinereus	Gt. Basin wildrye	2.00	4.36
Elymus smithii	Western wheatgrass	1.00	2.89
Hilaria jamesii	Galleta	1.50	5.48
Sporobolus airoides	Alkali sacaton	0.10	4.02
TOTALS		21.20	72.65
* Based on broadcast seeding methods.			

TABLE 5-4
PERMANENT RECLAMATION SEED MIXTURE
PRICE RIVER SYSTEM
(5.28 Acres)

Name	Acreage 1 Pounds PLS/Acre	Price/#	# Seeds/Pound	Total
Steambank Wheat Grass	5	$3.25	137,830	16.25
Tall Wheat Grass	3	$0.80	76,805	2.40
Alkali Sacaton	2	$3.00		6.60
Crested Wheat Grass Fairway	3	$1.20	319,660	3.60
Yellow Sweet Clover	2	$0.40	258,560	.80
Total	15			$29.65

Containerized of Bare Root Stock	Number Per Acre
Rubber Rabbitbrush	200 - $158 (@ .79 per plant)
Sandbar Willow	150 - $118
	$279/Acre
Fourwing Salt Brush Winter Fat Shadscale	May be utilized to supplement the shrub density as containerized stock depending on the success of the seeding effort.

TABLE 5-5
PROJECTED WATER CONSUMPTION

Use	Calculation Basis	Volume
1- Road Watering Dust Control	*1.20 gal/ton x 10MM ton/yr. = 12,000,000 gal/yr.	36.83 ac. ft./ yr.
2- Coal Washing	**2.5 gpm x 60 min./hr. 16 hr./day x 250 days/yr. = 6,000,000 gal/yr.	18.42 ac. ft./yr.
3- Bath House/Office	35 gal./day/person x 25 people/day x 250 day/yr. = 218,750 gal/yr.	0.67 ac. ft/yr.
	Total Projected Water Usage =	55.92 ac.ft./yr.

* Average usage over last 5 years.
** Projected make-up water for washing circuit.

I.D. SIGN

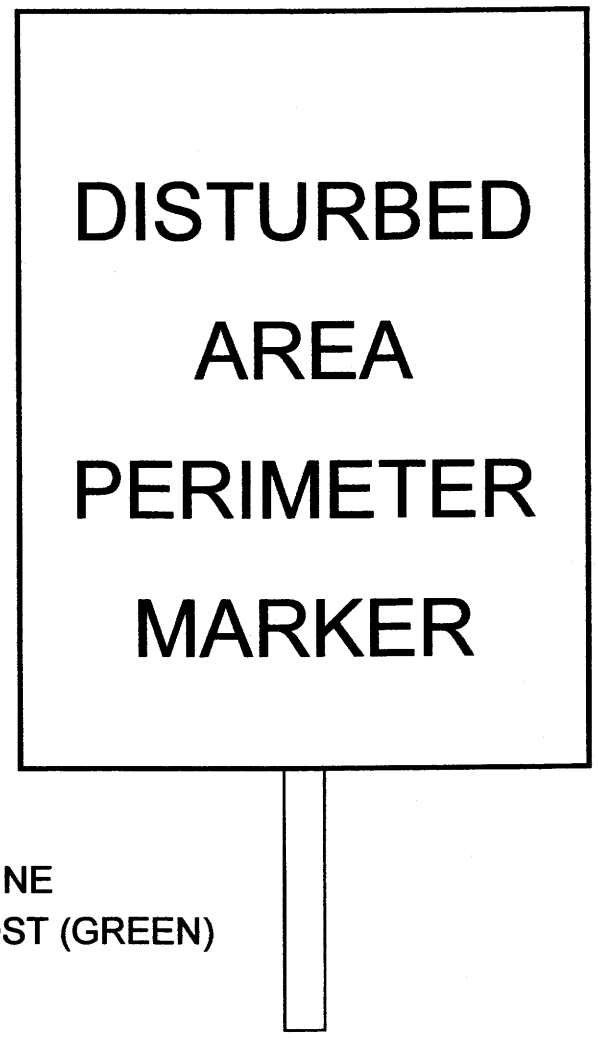
SAVAGE COAL TERMINAL
I.D.-42-01444
SAVAGE SERVICES CORPORATION
6340 SOUTH 3000 EAST, #600
SALT LAKE CITY, UTAH 84121
(801) 944-6600
PERMIT NO. C/007/022

REFUSE PILE SIGN

SAVAGE COAL TERMINAL
REFUSE FILL AREA
I.D. NO. 1211-UT-09-01444-01

FIGURE 5-1

PERIMETER MARKERS
STEEL SIGN (12" x 8")



48" STEEL LINE
T FENCE POST (GREEN)

TOPSOIL STORAGE MARKER
(18" x 12")

FIGURE 5-2

FIGURE 5-3

TYPICAL COAL ANALYSIS

NO. 7 MINE - CASTLE GATE "A" SEAM

COMMERCIAL TESTING & ENGINEERING CO.

GENERAL OFFICES: 1919 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • (312) 953-9300

Member of the SGS Group (Société Générale de Surveillance)

PLEASE ADDRESS ALL CORRESPONDENCE TO:
224 SO. CARBON AVE., PRICE, UT 84501
TELEPHONE: (801) 637-7540

BEAVER CREEK COAL CO.
P.O. Box 1378
Price, Utah 84501

February 6, 1989

Sample identification by: Beaver Creek Coal Co.

No. 7 Mine

Kind of sample reported to us	Coal
Sample taken at	C V Spur
Sample taken by	Beaver Creek Coal Co.
Date sampled	12/30/88
Date received	01/24/89

Analysis report no. 57-28459

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis
% Moisture	8.63	xxxxx
% Ash	6.54	7.16
Btu/lb	12380	13549
% Sulfur	0.50	0.55

% Air Dry Loss =	6.93
Moisture, Ash-free Btu =	14594
Pounds of SO2 per 10^6 Btu =	0.81
Moist, Mineral matter free Btu * =	13333
(Based on as rec'd moisture)*	
Pounds of Sulfur per 10^6 Btu =	0.41
% Residual moisture =	1.83

NEUTRALIZATION POTENTIAL — 6 tons $CaCO_3$ / 1000 tons

ACID POTENTIAL (of pyritic sulfur) — 3 tons $CaCO_3$ / 1000 tons

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Darlene Pennington

Manager, Price Laboratory

DP/rf

FIGURE 5-4

REFUSE PILE ANALYSIS

COMMERCIAL TESTING & ENGINEERING CO.
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CE 1908
Member of the SGS Group (Société Générale de Surveillance)

PLEASE ADDRESS ALL CORRESPONDENCE TO:
224 SO. CARBON AVE., PRICE, UT 84501
TELEPHONE: (801) 637-7540

BEAVER CREEK COAL CO.
P.O. Box 1378
Price, Utah 84501

February 6, 1989

Sample identification by

Beaver Creek Coal Co.

Refuse material

Kind of sample reported to us	Coal
Sample taken at	C V Spur
Sample taken by	Beaver Creek Coal Co.
Date sampled	12/30/88
Date received	01/24/89

Analysis report no. 57-28458

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis
% Moisture	5.75	xxxxx
% Ash	30.96	32.85
Btu/lb	8483	9000
% Sulfur	0.62	0.66

% Air Dry Loss =	4.77
Moisture, Ash-free Btu =	13403
Pounds of SO2 per 10^6 Btu =	1.47
Moist, Mineral matter free Btu * =	12763
(Based on as rec'd moisture)*	
Pounds of Sulfur per 10^6 Btu =	0.73
% Residual moisture =	1.03

NEUTRALIZATION POTENTIAL 97 tons $CaCO_3$ / 1000 tons
ACID POTENTIAL (of pyritic sulfur) 10 tons $caCO_3$ / 1000 tons

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Darlene Pennington

Manager, Price Laboratory

DP/rf

COMMERCIAL TESTING & ENGINEERING CO.
GENERAL OFFICES: 228 NORTH LA SALLE STREET, CHICAGO, ILLINOIS 60601 · AREA CODE 312 726-8434

SINCE 1908

Reply to
139 South Main
Helper, Utah 84526

Phone: 801-472-3537

March 25, 1980

Mr. Herman Beckman
BEAVER CREEK COAL CO.
P. O. Box AU
Price, Utah 84501

ANALYTICAL REPORT

Acidity and pH were determined on a 1:1 w/v water extract prepared according to the procedures of U.S.D.A. Agriculture Handbook No. 60.

Separate portions of the sample were extracted following the procedures of the U.S. EPA as outlined in the Federal Register, Part IV, December 18, 1978. The extracts were then analyzed for barium, cadmium, chromium, lead, and silver by flame atomic absorption, for arsenic and selenium by hydride generation atomic absorption, and for mercury by cold vapor flameless atomic absorption.

The results of these analyses are presented in Table No. 1 and are reported in mg/l unless otherwise indicated.

If you have any questions concerning these analyses, please call.

Jack Blair, Manager
Helper Laboratory

COMMERCIAL TESTING & ENGINEERING CO.
GENERAL OFFICES: 228 NORTH LA SALLE STREET, CHICAGO, ILLINOIS 60601 · AREA CODE 312 726-8434

STERN DIVISION MANAGER
LOYD W. TAYLOR, JR.

SINCE 1908

PLEASE ADDRESS ALL CORRESPONDENCE TO
139 SOUTH MAIN, HELPER, UTAH 84526
OFFICE TEL. (801) 472-3537

BEAVER CREEK COAL CO.
P. O. Box AU
Price, Utah 84501

Mar. 25, 1980

Sample identification by Beaver Creek Coal Co.
Refuse Elevator-Coarse

Kind of sample reported to us	Coal Refuse
Sample taken at	C. V. Spur
Sample taken by	Beaver Creek Coal Co.
Date sampled	12-04-79
Date received	12-05-79

Analysis report no. 57-3117 page 3

Table No. 1

Parameter	Concentration in mg/l
Acidity, as $CaCO_3$	15
pH	7.8
Arsenic	≤0.003
Barium	0.32
Cadmium	≤0.003
Chromium	≤0.02
Lead	≤0.09
Mercury, ug/l	0.12
Selenium	≤0.004
Silver	≤0.005

JB/gp

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.
Jack Blair
Jack Blair
Manager, Helper Laboratory

Original Copy Watermarked For Your Protection

Charter Member

FIGURE 5-5

OSM SAFETY FACTOR CALCULATIONS

FOR

REFUSE PILE

* SLOPE STABILITY ANALYSIS *

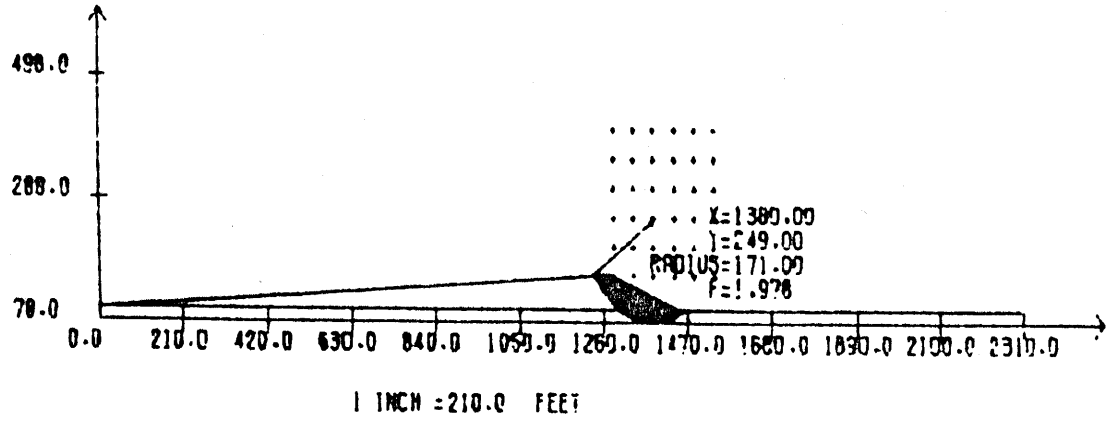
DATE: 12-19-80 RUN NUMBER: 5 PROJECT: WORST CASE CONDITION BEAVER CREEK COAL CO

SIMPLIFIED BISHOP'S METHOD

Figure - 1
OSM Stability Analysis
Processing Waste Pile, C.V. Spur

① UNIT WEIGHT = 115.00 PCF
COHESION = 100.00 PSF
FRICTION ANGLE = 25.00 DEGREES

② UNIT WEIGHT = 145.00 PCF
COHESION = 500.00 PSF
FRICTION ANGLE = 20.00 DEGREES



1 INCH = 210.0 FEET

```
 80/12/19. 11.11.36.
PROGRAM   SLPOUT

1
         1         2         3         4         5         6         7         8
 12345678901234567890123456789012345678901234567890123456789012345678901234567890

 HEAD21112-19-80   5     WORST CASE CONDITION BEAVER CREEK COAL CO   112 11  1
 GRID  0
   0.01280. 50.0    5 149. 50.0    5  0.0  0.0   10 135.  40.  0.00.000 0.00  0.0

 GEOM  2
    0.1270.1445.2300.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0

  100. 160. 100. 100.   0.   0.   0.   0.   0.   0.   0.   0.   9.   0.   0.
    0.2300.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0

  100. 100.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
 SOIL  2
     115.00     100.00      25.00       0.00  COAL WASTE WORST CASE              10

     145.00     500.00      20.00       0.00  MANCOS SHALE WORST CASE            20

 POR4  2 WORST CASE PORE PRESSURE
    0.1140.1445.2300.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0

  100. 120. 100. 100.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
    0.1140.1445.2300.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0

  100. 120. 100. 100.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
 CALC  0
         1         2         3         4         5         6         7         8
 12345678901234567890123456789012345678901234567890123456789012345678901234567890
```

For definition of key words and data input information, refer to Slope II Computer Program User's Manual S-10 available in the Earth Sciences and Geotechnical Branch, OSM, Region V.

FIGURE 5-6

MSHA LETTERS

FOR

REFUSE PILES

U. S. Department of Labor

Mine Safety and Health Administration
P.O. Box 25367
[illegible]

Coal Mine Safety and Health
District 9

31

Charles Boyd Rhodes
Savage Industries Inc.
3321 Soldier Creek Road
P. O. Box 587
Wellington, UT 84542

RE: Savage Coal Terminal
Mine ID No.42-01444
Refuse Pile
ID No. 1211-UT-09-01444-01
Reassigned Identification Number

Dear Mr. Rhodes:

Our files show one(1) refuse pile, ID No. 1211-UT-09-0034. In order to update the files, the District Manager is reassigning the following identification number for the refuse pile.

NEW NUMBER	OLD NUMBER
ID No. 1211-UT-09-01444-01	ID No. 1211-UT-09-0034

Please change all markers to indicate the new number and refer to the reassigned identification number on future correspondence with this office.

Sincerely,

John A. Kuzar
District Manager

U. S. Department of Labor

Mine Safety and Health Administration
P O Box 25367
Denver, Colorado 80225
Coal Mine Safety & Health
District 9

March 2, 1981

Dan W. Guy, P.E.
Chief Engineer
Beaver Creek Coal Company
P.O. Box AU
Price, UT 84501

Re: C. V. Spur Prep Facility, I.D. No. 42-01444
Site I.D. No. 1211-UT-9-0034
Refuse Pile Report

Dear Mr. Guy:

The refuse pile report submitted for the subject site has been reviewed by this office and will be maintained on file.

No further information need be submitted to this office regarding this site unless the site is determined to present a hazard by the District Manager, or at such time the site is to be abandoned.

Sincerely,

for John W. Barton
District Manager

U. S. Department of Labor

Mine Safety and Health Administration
P O Box 25367
Denver, Colorado 80225
Coal Mine Safety & Health
District 9

March 19, 1981

Dan W. Guy, P.E.
Chief Engineer
Beaver Creek Coal Company
P.O. Box A.U.
Price, UT 84501

Re: C.V. Spur Prep Facility, ID No. 42-01444
Site ID No. 1211-UT-9-0033
Refuse Pile Report

Dear Mr. Guy:

The refuse pile report submitted March 5, 1981, for the subject site has been reviewed by this office and will be maintained on file.

No further information need be submitted to this office regarding this site unless the site is determined to present a hazard by the District Manager, or at such time the site is to be abandoned.

Sincerely,

for Harold E. Nelson
John W. Barton
District Manager

U.S. DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION
Mailing Address:
P.O. Box 25367, DFC
Denver, Colorado 80225
Street Address:
730 Simms
Lakewood, Colorado

Coal Mine Safety and Health
District 9

October 2, 1979

Dan W. Guy, P. E.
Chief Engineer
Swisher Coal Company
P. O. Box A. U.
Price, Utah 84501

Re: C. V. Spur Preparation Facility
I. D. No. 42-01444
Temporary Refuse Fill Area No. 1, I. D. No. 1211-UT-9-0033
Refuse Dumping Site Area No. 2, I. D. No. 1211-UT-9-0034

Dear Mr. Guy:

Your letter of June 28, 1979, notifying this office of two (2) new refuse sites at the C. V. Spur Preparation Facility, has been received and the following identification numbers assigned:

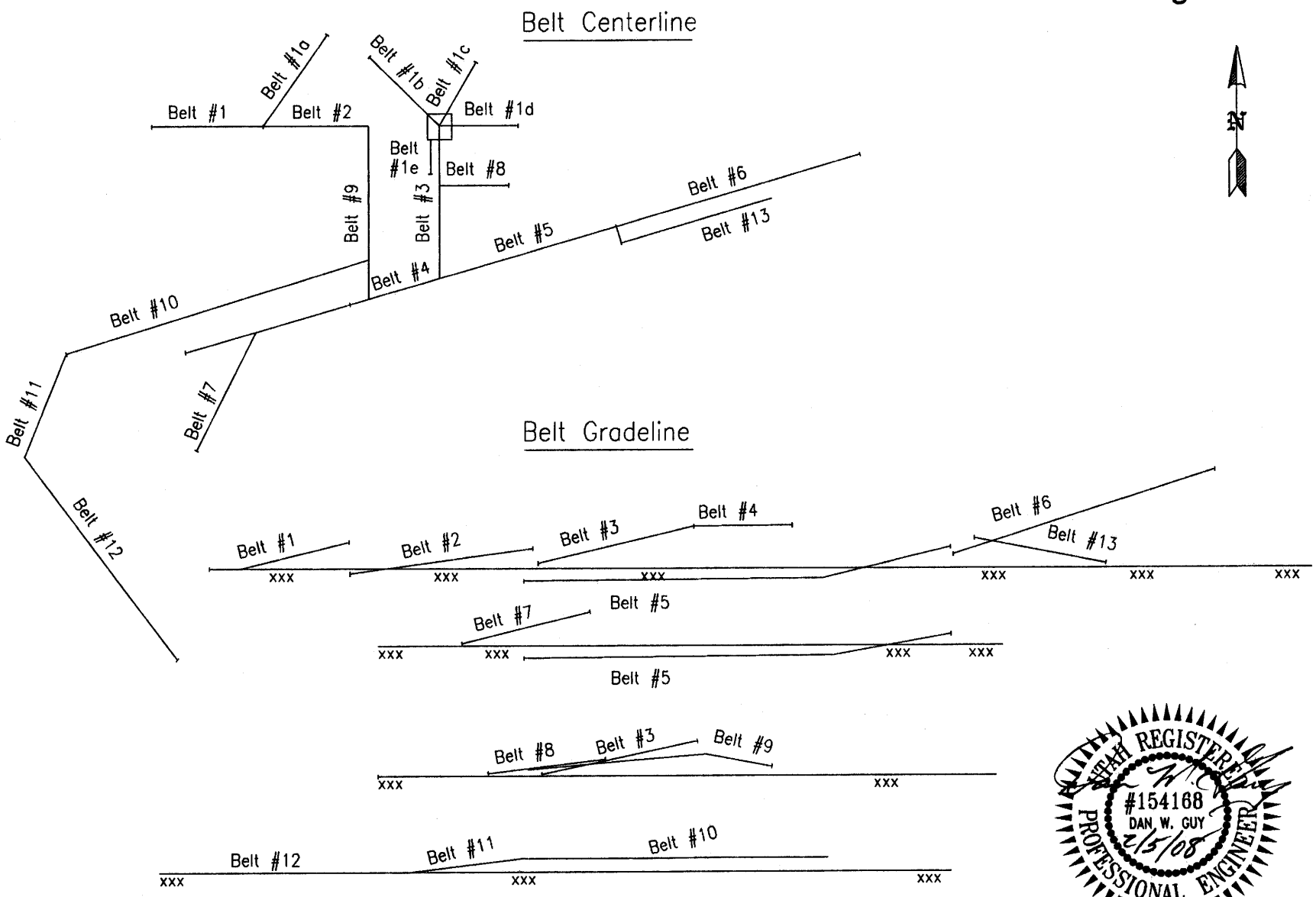
(a) Temporary Refuse Fill Area No. 1, I. D. No. 1211-UT-9-0033
(b) Refuse Dumping Site Area No. 2, I. D. No. 1211-UT-9-0034

Please note that Section 77.215-1, 30 CFR, requires an identification marker to be placed at each site, and Section 77.215-2, 30 CFR, requires a refuse pile report be submitted within 180 days of the date of this acknowledgement letter. Please refer to these two sections of Title 30 concerning the marker and report requirements.

Sincerely,

Harold E. Dolan
Supervisory Mining Engineer

Figure 5-7



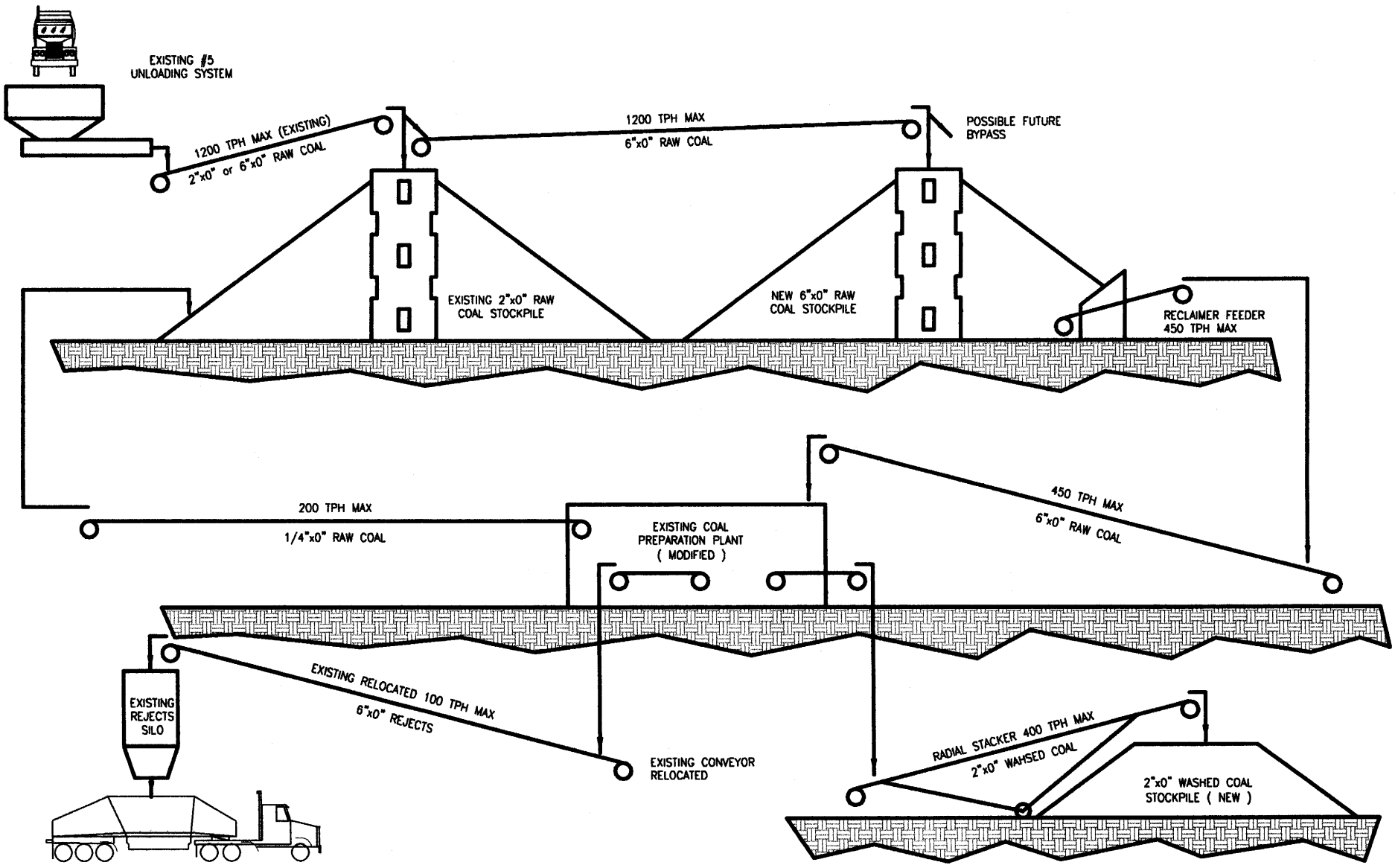
UTAH REGISTERED
#154168
DAN W. GUY
2/5/08
PROFESSIONAL ENGINEER

Savage Coal Terminal

Centerline and Grade of Belts

C.V. Spur 1"=300' August 2007

Figure 5-8



Savage Coal Terminal
Processing Flow Chart

C.V. Spur

Attachment 1

Refuse Pile Analyses

COMMERCIAL TESTING & ENGINEERING CO.

GENERAL OFFICES: 1919 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • TEL: 630-953-9300 FAX: 630-953-9306

1908®

SGS Member of the SGS Group (Société Générale de Surveillance)

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1020
HUNTINGTON, UT 84528
TEL: (435) 653-2311
FAX: (435) 653-2436

November 5, 1999

SAVAGE COAL TERMINAL
P.O. 587
WELLINGTON UTAH 84542
BOYD RHODES

Sample identification by

Kind of sample reported to us	COMPOSITE HOLES 1-7 1 BAG 47.00 LBS. EST. TOP SIZE 3"
Sample taken at	Savage Coal Terminal
Sample taken by	Savage
Date sampled	------
Date received	November 2, 1999

Analysis Report No. 59-224583

PROXIMATE ANALYSIS	As Received	Dry Basis
% Moisture	10.51	xxxxx
% Ash	44.57	49.80
% Volatile	26.09	29.15
% Fixed Carbon	18.83	21.05
	100.00	100.00
Btu/lb	5923	6619
% Sulfur	0.53	0.59
MAF Btu		13185
Alk. as Sodium Oxide	0.75	0.84

ULTIMATE ANALYSIS	As Received	Dry Basis
% Moisture	10.51	xxxxx
% Carbon	33.90	37.88
% Hydrogen	2.47	2.76
% Nitrogen	0.65	0.73
% Sulfur	0.53	0.59
% Ash	44.57	49.80
% Oxygen(diff)	7.37	8.24
	100.00	100.00

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Huntington Laboratory

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November 5, 1999

SAVAGE COAL TERMINAL
P.O. 587
WELLINGTON UTAH 84542
BOYD RHODES

Sample identification by

Kind of sample reported to us	COMPOSITE HOLES 1-7 1 BAG 47.00 LBS. EST. TOP SIZE 3"
Sample taken at	Savage Coal Terminal
Sample taken by	Savage
Date sampled	------
Date received	November 2, 1999

Analysis Report No. 59-224583

ANALYSIS OF ASH	WEIGHT %, IGNITED BASIS
Silicon dioxide	64.64
Aluminum oxide	13.12
Titanium dioxide	0.54
Iron oxide	2.86
Calcium oxide	11.49
Magnesium oxide	2.63
Potassium oxide	2.09
Sodium oxide	0.31
Sulfur trioxide	1.11
Phosphorus pentoxide	0.17
Strontium oxide	0.02
Barium oxide	0.06
Manganese oxide	0.03
Undetermined	0.93
	100.00

Silica Value = 79.20
Base:Acid Ratio = 0.25
T_{250} Temperature = 2665 |F

Type of Ash = LIGNITIC
Fouling Index = 0.31
Slagging Index = xxxxx

INCORPORATED
EFFECTIVE:
AUG 10 2000

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

UTAH DIVISION OIL, GAS AND MINING

Huntington Laboratory

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November 4, 1999

SAVAGE COAL TERMINAL
P.O. 587
WELLINGTON UTAH 84542
BOYD RHODES

Sample identification by

Kind of sample reported to us		HOLE #1 4' 1 BAG 35.0 LBS. EST. TOP SIZE 3"
Sample taken at	Savage Coal Terminal	
Sample taken by	Savage	
Date sampled	------	
Date received	November 2, 1999	

Analysis Report No. 59-224562

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis		
% Moisture	6.01	XXXXX		
% Ash	18.28	19.45		
Btu/lb	10525	11198	MAF	13902
% Sulfur	0.45	0.48		

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

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November 4, 1999

SAVAGE COAL TERMINAL
P.O. 587
WELLINGTON UTAH 84542
BOYD RHODES

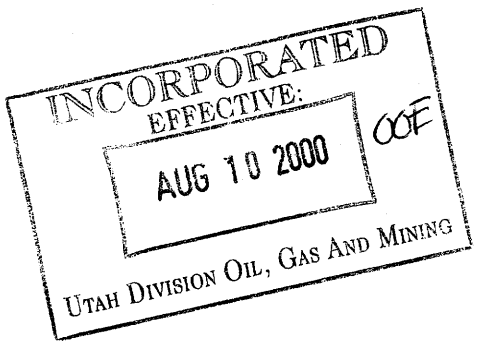
Sample identification by

Kind of sample reported to us		HOLE #1 8' 1 BAG 67.75 LBS. EST. TOP SIZE 3"
Sample taken at	Savage Coal Terminal	
Sample taken by	Savage	
Date sampled	------	
Date received	November 2, 1999	

Analysis Report No. 59-224563

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis		
% Moisture	9.03	xxxxx		
% Ash	56.47	62.07		
Btu/lb	4228	4648	MAF	12254
% Sulfur	0.34	0.37		



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November 3, 1999

SAVAGE COAL TERMINAL
P.O. 587
WELLINGTON UTAH 84542
BOYD RHODES

Sample identification by

Kind of sample reported to us

HOLE #1
12.5'
1 BAG
56.50 LBS.
EST. TOP SIZE 3"

Sample taken at Savage Coal Terminal

Sample taken by Savage

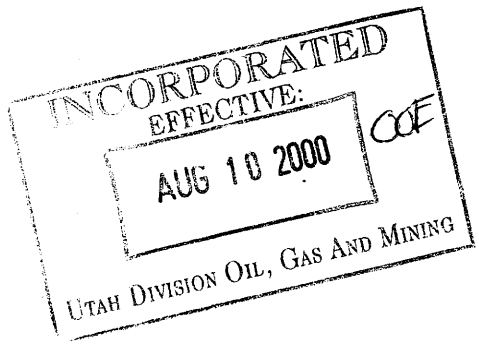
Date sampled ------

Date received November 2, 1999

Analysis Report No. 59-224564

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis		
% Moisture	10.96	xxxxx		
% Ash	59.26	66.55		
Btu/lb	3717	4175	MAF	12481
% Sulfur	0.37	0.41		



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November 3, 1999

SAVAGE COAL TERMINAL
P.O. 587
WELLINGTON UTAH 84542
BOYD RHODES

Sample identification by

Kind of sample reported to us		HOLE #2 4' 1 BAG 42.50 LBS. EST. TOP SIZE 3"
Sample taken at	Savage Coal Terminal	
Sample taken by	Savage	
Date sampled	------	
Date received	November 2, 1999	

Analysis Report No. 59-224565

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis		
% Moisture	15.90	xxxxx		
% Ash	38.29	45.53		
Btu/lb	6043	7185	**MAF**	13191
% Sulfur	0.61	0.72		

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

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November 3, 1999

SAVAGE COAL TERMINAL
P.O. 587
WELLINGTON UTAH 84542
BOYD RHODES

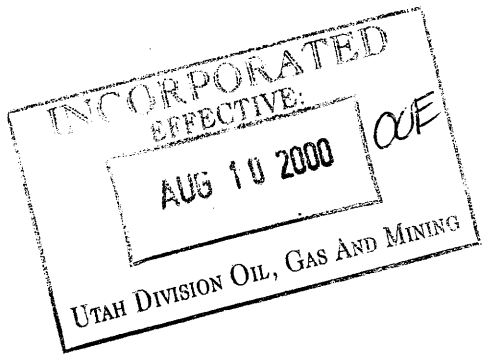
Sample identification by

Kind of sample reported to us		HOLE #2 8' 1 BAG 51.25 LBS. EST. TOP SIZE 3"
Sample taken at	Savage Coal Terminal	
Sample taken by	Savage	
Date sampled	------	
Date received	November 2, 1999	

Analysis Report No. 59-224566

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis		
% Moisture	11.78	xxxxx		
% Ash	49.31	55.90		
Btu/lb	5125	5809	MAF	13172
% Sulfur	0.53	0.60		



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November 3, 1999

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P.O. 587
WELLINGTON UTAH 84542
BOYD RHODES

Sample identification by

Kind of sample reported to us		HOLE #2
		15'
Sample taken at	Savage Coal Terminal	1 BAG
		56.50 LBS.
Sample taken by	Savage	EST. TOP SIZE 3"
Date sampled	------	
Date received	November 2, 1999	

Analysis Report No. 59-224567

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis		
% Moisture	17.37	XXXXX		
% Ash	37.18	44.99		
Btu/lb	6056	7329	MAF	13323
% Sulfur	0.43	0.52		

Respectfully submitted,
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November 3, 1999

SAVAGE COAL TERMINAL
P.O. 587
WELLINGTON UTAH 84542
BOYD RHODES

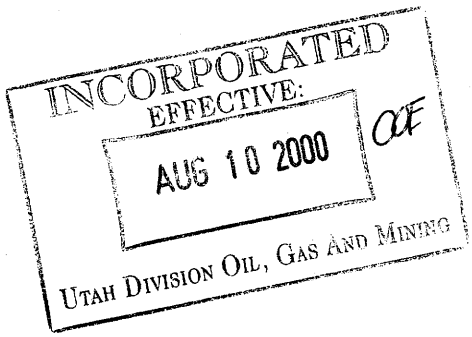
Sample identification by

Kind of sample reported to us		HOLE #3 4' 1 BAG 58.50 LBS. EST. TOP SIZE 3"
Sample taken at	Savage Coal Terminal	
Sample taken by	Savage	
Date sampled	------	
Date received	November 2, 1999	

Analysis Report No. 59-224568

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis		
% Moisture	10.83	xxxxx		
% Ash	45.54	51.07		
Btu/lb	5782	6484	MAF	13252
% Sulfur	0.75	0.84		



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November 3, 1999

SAVAGE COAL TERMINAL
P.O. 587
WELLINGTON UTAH 84542
BOYD RHODES

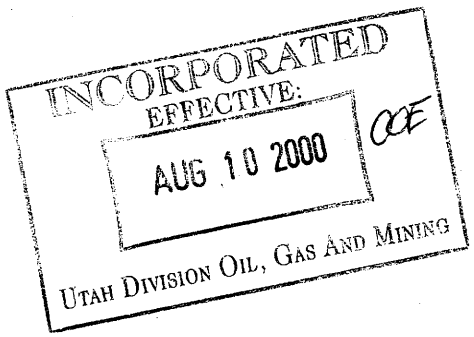
Sample identification by

Kind of sample reported to us		HOLE #3 8' 1 BAG 64.25 LBS. EST. TOP SIZE 3"
Sample taken at	Savage Coal Terminal	
Sample taken by	Savage	
Date sampled	------	
Date received	November 2, 1999	

Analysis Report No. 59-224569

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis		
% Moisture	13.81	xxxxx		
% Ash	47.91	55.59		
Btu/lb	5124	5945	**MAF**	13387
% Sulfur	0.67	0.78		



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November 3, 1999

SAVAGE COAL TERMINAL
P.O. 587
WELLINGTON UTAH 84542
BOYD RHODES

Sample identification by

Kind of sample reported to us		HOLE #3 14.5' 1 BAG 56.75 LBS. EST. TOP SIZE 3"
Sample taken at	Savage Coal Terminal	
Sample taken by	Savage	
Date sampled	------	
Date received	November 2, 1999	

Analysis Report No. 59-224570

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis		
% Moisture	13.26	xxxxx		
% Ash	40.85	47.10		
Btu/lb	6329	7297	MAF	13794
% Sulfur	0.93	1.07		

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

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November 3, 1999

SAVAGE COAL TERMINAL
P.O. 587
WELLINGTON UTAH 84542
BOYD RHODES

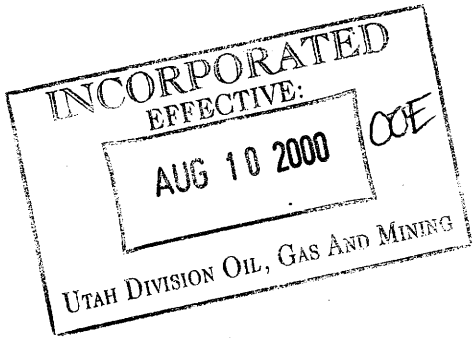
Sample identification by

Kind of sample reported to us		HOLE #4 4' 1 BAG 59.75 LBS. EST. TOP SIZE 3"
Sample taken at	Savage Coal Terminal	
Sample taken by	Savage	
Date sampled	------	
Date received	November 2, 1999	

Analysis Report No. 59-224571

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis		
% Moisture	9.16	xxxxx		
% Ash	59.60	65.61		
Btu/lb	3542	3899	MAF	11338
% Sulfur	0.45	0.49		



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November 3, 1999

SAVAGE COAL TERMINAL
P.O. 587
WELLINGTON UTAH 84542
BOYD RHODES

Sample identification by

Kind of sample reported to us		HOLE #4 8' 1 BAG 64.75 LBS. EST. TOP SIZE 3"
Sample taken at	Savage Coal Terminal	
Sample taken by	Savage	
Date sampled	------	
Date received	November 2, 1999	

Analysis Report No. 59-224572

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis		
% Moisture	8.27	xxxxx		
% Ash	66.52	72.52		
Btu/lb	2689	2931	**MAF**	10666
% Sulfur	0.41	0.45		

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

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November 3, 1999

SAVAGE COAL TERMINAL
P.O. 587
WELLINGTON UTAH 84542
BOYD RHODES

Sample identification by

Kind of sample reported to us		HOLE #4 14' 1 BAG 63.75 LBS. EST. TOP SIZE 3"
Sample taken at	Savage Coal Terminal	
Sample taken by	Savage	
Date sampled	------	
Date received	November 2, 1999	

Analysis Report No. 59-224573

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis		
% Moisture	14.32	xxxxx		
% Ash	57.40	66.99		
Btu/lb	3515	4102	**MAF**	12427
% Sulfur	0.44	0.51		

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

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November 3, 1999

SAVAGE COAL TERMINAL
P.O. 587
WELLINGTON UTAH 84542
BOYD RHODES

Sample identification by

Kind of sample reported to us		HOLE #5
		4'
Sample taken at	Savage Coal Terminal	1 BAG
		54.50 LBS.
Sample taken by	Savage	EST. TOP SIZE 3"
Date sampled	------	
Date received	November 2, 1999	

Analysis Report No. 59-224574

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis		
% Moisture	9.19	XXXXX		
% Ash	42.80	47.13		
Btu/lb	6310	6949	MAF	13144
% Sulfur	0.53	0.58		

Respectfully submitted,
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November 3, 1999

SAVAGE COAL TERMINAL
P.O. 587
WELLINGTON UTAH 84542
BOYD RHODES

Sample identification by

Kind of sample reported to us		HOLE #5 8' 1 BAG 62.25 LBS. EST. TOP SIZE 3"
Sample taken at	Savage Coal Terminal	
Sample taken by	Savage	
Date sampled	------	
Date received	November 2, 1999	

Analysis Report No. 59-224575

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis		
% Moisture	8.85	xxxxx		
% Ash	44.74	49.08		
Btu/lb	6235	6840	**MAF**	13433
% Sulfur	0.44	0.48		

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

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November 3, 1999

SAVAGE COAL TERMINAL
P.O. 587
WELLINGTON UTAH 84542
BOYD RHODES

Sample identification by

Kind of sample reported to us

HOLE #5
14'
1 BAG
68.0 LBS.
EST. TOP SIZE 3"

Sample taken at Savage Coal Terminal

Sample taken by Savage

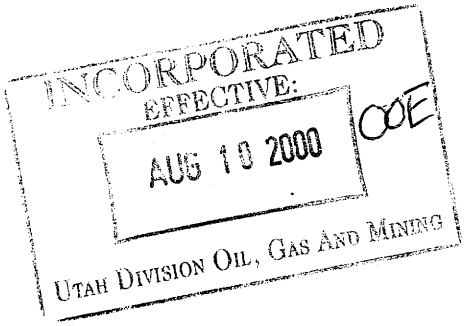
Date sampled ------

Date received November 2, 1999

Analysis Report No. 59-224576

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis		
% Moisture	9.96	xxxxx		
% Ash	61.70	68.52		
Btu/lb	3284	3647	MAF	11585
% Sulfur	0.32	0.36		



Respectfully submitted,
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November 4, 1999

SAVAGE COAL TERMINAL
P.O. 587
WELLINGTON UTAH 84542
BOYD RHODES

Sample identification by

Kind of sample reported to us		HOLE #6 4' 1 BAG 61.50 LBS. EST. TOP SIZE 3"
Sample taken at	Savage Coal Terminal	
Sample taken by	Savage	
Date sampled	------	
Date received	November 2, 1999	

Analysis Report No. 59-224577

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis		
% Moisture	6.79	xxxxx		
% Ash	20.11	21.58		
Btu/lb	10117	10854	**MAF**	13841
% Sulfur	0.62	0.66		

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Huntington Laboratory

MEMBER ACIL

COMMERCIAL TESTING & ENGINEERING CO.

GENERAL OFFICES: 1919 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • TEL: 630-953-9300 FAX: 630-953-9306

1908®

SGS Member of the SGS Group (Société Générale de Surveillance)

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1020
HUNTINGTON, UT 84528
TEL: (435) 653-2311
FAX: (435) 653-2436

November 4, 1999

SAVAGE COAL TERMINAL
P.O. 587
WELLINGTON UTAH 84542
BOYD RHODES

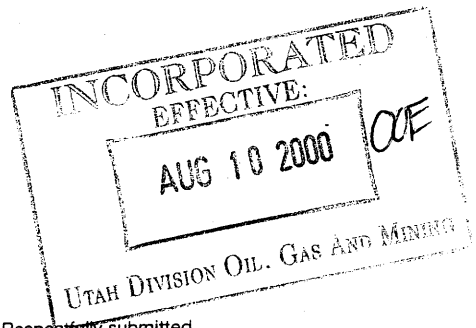
Sample identification by

Kind of sample reported to us		HOLE #6 8' 1 BAG 55.0 LBS. EST. TOP SIZE 3"
Sample taken at	Savage Coal Terminal	
Sample taken by	Savage	
Date sampled	------	
Date received	November 2, 1999	

Analysis Report No. 59-224578

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis		
% Moisture	8.60	XXXXX		
% Ash	29.66	32.45		
Btu/lb	8242	9017	**MAF**	13349
% Sulfur	0.53	0.58		



Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Huntington Laboratory

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November 4, 1999

SAVAGE COAL TERMINAL
P.O. 587
WELLINGTON UTAH 84542
BOYD RHODES

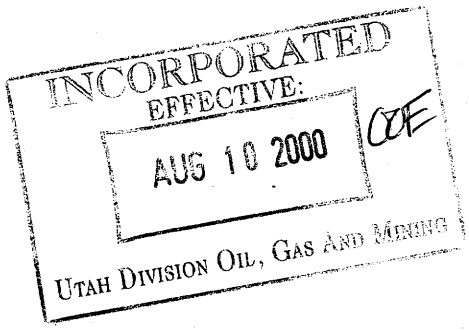
Sample identification by

Kind of sample reported to us		HOLE #6 14' 1 BAG 63.25 LBS. EST. TOP SIZE 3"
Sample taken at	Savage Coal Terminal	
Sample taken by	Savage	
Date sampled	------	
Date received	November 2, 1999	

Analysis Report No. 59-224579

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis		
% Moisture	13.16	xxxxx		
% Ash	59.98	69.07		
Btu/lb	3260	3754	MAF	12137
% Sulfur	0.36	0.42		



Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Huntington Laboratory

MEMBER ACIL

COMMERCIAL TESTING & ENGINEERING CO.

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HUNTINGTON, UT 84528
TEL: (435) 653-2311
FAX: (435) 653-2436

November 4, 1999

SAVAGE COAL TERMINAL
P.O. 587
WELLINGTON UTAH 84542
BOYD RHODES

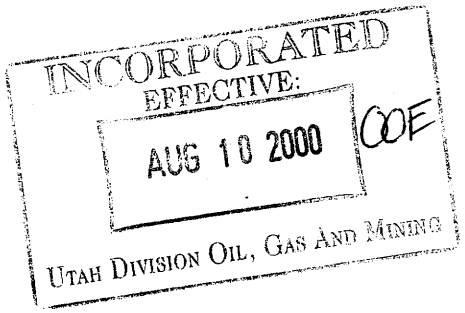
Sample identification by

Kind of sample reported to us		HOLE #7 4' 1 BAG 56.50 LBS. EST. TOP SIZE 3"
Sample taken at	Savage Coal Terminal	
Sample taken by	Savage	
Date sampled	------	
Date received	November 2, 1999	

Analysis Report No. 59-224580 Page 1 of 1

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis		
% Moisture	13.21	xxxxx		
% Ash	47.74	55.01		
Btu/lb	5148	5932	**MAF**	13185
% Sulfur	0.41	0.47		



Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Huntington Laboratory

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COMMERCIAL TESTING & ENGINEERING CO.

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HUNTINGTON, UT 84528
TEL: (435) 653-2311
FAX: (435) 653-2436

November 4, 1999

SAVAGE COAL TERMINAL
P.O. 587
WELLINGTON UTAH 84542
BOYD RHODES

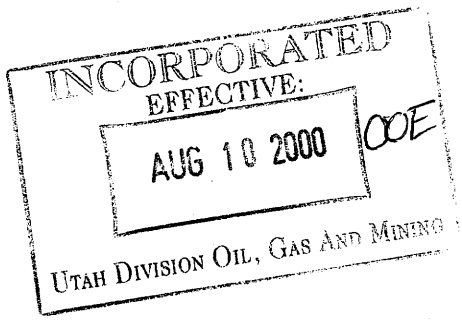
Sample identification by

Kind of sample reported to us		HOLE #7 8' 1 BAG 52.25 LBS. EST. TOP SIZE 3"
Sample taken at	Savage Coal Terminal	
Sample taken by	Savage	
Date sampled	------	
Date received	November 2, 1999	

Analysis Report No. 59-224581

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis		
% Moisture	12.48	xxxxx		
% Ash	35.74	40.84		
Btu/lb	7162	8183	MAF	13832
% Sulfur	0.49	0.56		



Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Huntington Laboratory

MEMBER ACIL

COMMERCIAL TESTING & ENGINEERING CO.

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FAX: (435) 653-2436

November 4, 1999

SAVAGE COAL TERMINAL
P.O. 587
WELLINGTON UTAH 84542
BOYD RHODES

Sample identification by

Kind of sample reported to us

HOLE #7
14'
1 BAG
64.25 LBS.
EST. TOP SIZE 3"

Sample taken at Savage Coal Terminal

Sample taken by Savage

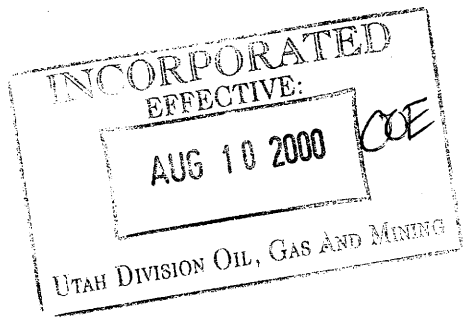
Date sampled ------

Date received November 2, 1999

Analysis Report No. 59-224582

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis		
% Moisture	12.93	xxxxx		
% Ash	55.72	63.99		
Btu/lb	4034	4633	MAF	12866
% Sulfur	0.37	0.42		



Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Huntington Laboratory

MEMBER ACIL

Note :

No Refuse has been returned to Savage Coal Terminal at this time. Required Acid-Toxic Analyses will be provided when refuse is returned.

Appendix 8-3

Liability Insurance

Savage Services Corporation
Savage Coal Terminal

ACORD™ CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 10/06/2008

PRODUCER
Marsh USA Risk & Insurance Services
15 West South Temple, Suite 700
Salt Lake City, UT 84101
Attn: Chris Brimhall (801) 533-3627

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED
SAVAGE COMPANIES
6340 SOUTH 3000 EAST, SUITE 600
SALT LAKE CITY, UT 84121

INSURERS AFFORDING COVERAGE	NAIC #
INSURER A: ACE American Insurance Company	22667
INSURER B: ACE Fire Underwriters Co	20702
INSURER C:	
INSURER D:	
INSURER E:	

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	ADD'L INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
A		GENERAL LIABILITY X COMMERCIAL GENERAL LIABILITY CLAIMS MADE [X] OCCUR X SIR $500,000 GENERAL AGGREGATE LIMIT APPLIES PER: POLICY PRO-JECT LOC	XSLG21703072	04/01/08	04/01/09	EACH OCCURRENCE DAMAGE TO RENTED PREMISES(Ea occurence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 4,500,000 $ 4,500,000 $ $ 4,500,000 $ 9,500,000 $ 4,500,000
A		AUTOMOBILE LIABILITY X ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS X HIRED AUTOS X NON-OWNED AUTOS	ISAH08013354	04/01/08	04/01/09	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 5,000,000 $ $ $
		GARAGE LIABILITY ANY AUTO				AUTO ONLY - EA ACCIDENT OTHER THAN AUTO ONLY: EA ACC AGG	$ $ $
		EXCESS/UMBRELLA LIABILITY OCCUR CLAIMS MADE DEDUCTIBLE RETENTION $				EACH OCCURRENCE AGGREGATE	$ $
B A		WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? If yes, describe under SPECIAL PROVISIONS below	WLRC44467161 (AOS) WLRC44467173 (CA)	04/01/08 04/01/08	04/01/09 04/01/09	X WC STATU-TORY LIMITS OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 1,000,000 $ 1,000,000 $ 1,000,000
		OTHER					

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/EXCLUSIONS ADDED BY ENDORSEMENT/SPECIAL PROVISIONS

SUBJECT TO THE STANDARD EXCLUSIONS IN THE 2000 GENERAL LIABILITY ISO FORM, CG 00 01 10 01. COVERAGE FOR DAMAGE CAUSED BY EXPLOSIVES IS NOT SPECIFICALLY EXCLUDED ON THE GENERAL LIABILITY POLICY. RE: SAVAGE COAL TERMINAL PROCESS AND LOADOUT FACILITY ACT/007/022.

CERTIFICATE HOLDER SEA-001100711-21

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS & MINING
PO BOX 145801
SALT LAKE CITY, UT 84114-5801

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL [illegible] MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, [illegible]

AUTHORIZED REPRESENTATIVE
of Marsh USA Risk & Insurance Services
Chris Brimhall

Chris Brimhall

PRICE RIVER

5459

T14S R10E
T15S R10E

5538

5500

RIVER PUMP

SURFACE:
2 C'S PROPERTIES, LLC

MINERALS:
JOHN C. & SOPHIA CRITCHLOW

S.A.E. #1 PIPELINE 20' R/W

EXISTING FARM/ACCESS ROAD

SURFACE:
ROY D. CAMPBELL, ETUX

MINERALS:
OLGA DOWNARD

SURFACE:
2 C'S PROPERTIES, LLC

PRICE RIVER

3

2

1

S.A.E. #1 PIPELINE 20' R/W

SURFACE:
JOHN K. CRITCHLOW, ETUX

R.R. RIGHT OF WAY

SURFACE:
ROY D. CAMPBELL, ETUX

MINERALS:
PRICE CITY

5500

SURFACE:
ROY D. CAMPBELL, ETUX

MINERALS:
OLGA DOWNARD

SURFACE:
ROY D. & PEGGY L. CAMPBELL

S.A.E. #1 PIPELINE 20' R/W

EXISTING FARM/ACCESS ROAD

SURFACE:
STATE LAND

SURFACE:
E.W. STODDARD

MINERALS:
PRICE CITY

SURFACE:
ROY D. & PEGGY L. CAMPBELL

SURFACE:
DANIEL R. CAMPBELL, ETUX

5600

SURFACE:
NICK PLATIS, ETAL

SURFACE:
AGNES K. PEIRCE, TR.

MINERALS:
ELDRED E. PIERCE, JR. & GERALDINE THOMAS

ALAN WALTON

SURFACE:
E.W. STODDARD

MINERALS:
OLGA DOWNARD

S.A.E. #1 PIPELINE 20' R/W

SURFACE:
D&RGW RAILROAD COMPANY

MINERALS:
OLGA DOWNARD

10

11

12

PUMPHOUSE

SURFACE:
JOHN BROWN

OIL & GAS:
USA

COAL & OTHER MIN:
KENT E. & CLARA W. PETERSON

SURFACE:
U.P.C., INC.

(COVOL)

SAVAGE COAL TERMINAL

5500

SURFACE:
SAVAGE INDUSTRIES, INC.

OIL & GAS:
USA

COAL & OTHER MIN:
MOUNTAIN COAL COMPANY

SURFACE:
SAVAGE INDUSTRIES, INC.

MINERALS:
ERVIN & VIOLET FEICHKO

SURFACE:
D&RGW RAILROAD COMPANY

OIL & GAS:
ERVIN & VIOLET FEICHKO

COAL & OTHER MIN:
D&RGW RAILROAD COMPANY

SURFACE:
ROYD & PEGGY L. CAMPBELL

SURFACE:
SAVAGE INDUSTRIES, INC.

OIL & GAS:
JACK & FRANK WORLD

COAL & OTHER MIN:
MOUNTAIN COAL COMPANY

KEVEN & LOIS JENSEN

SURFACE:
D&RGW RAILROAD COMPANY

OIL & GAS:
JACK & FRANK WORLD

COAL & OTHER MIN:
D&RGW RAILROAD COMPANY

SURFACE:
SHANE R. & KRISTIN CAMPBELL

SURFACE:
JOHN L. & CHRISTY L. HANNA

MINERALS:
G.W. WATERMAN

SURFACE:
CIRCLE K RANCH

SURFACE:
DAVID C. SWENSON

MINERALS:
STATE OF UTAH

SURFACE:
KDS COMMERCIAL PROPERTY, LLC.

SURFACE:
DAVID C. SWENSON

CIRCLE K RANCH

SURFACE:
D&RGW RAILROAD COMPANY

MINERALS:
STATE OF UTAH

SURFACE:
HIGH COUNTRY FOREST PRODUCTS

5500

5540

15

14

13

5531

5500

REVISION #	DESCRIPTION

LEGEND:

PERMIT AREA:

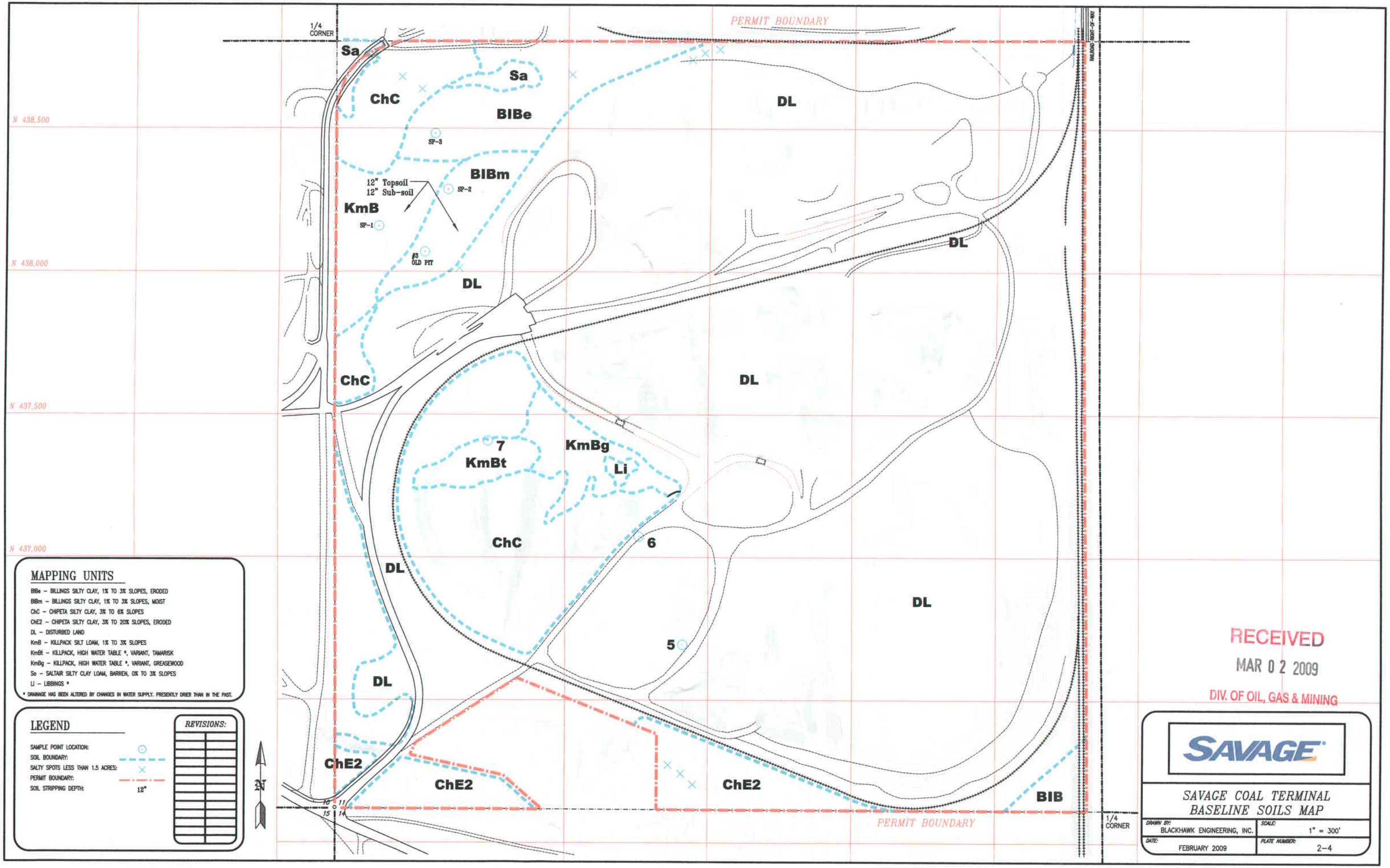
RECEIVED
MAR 0 2 2009
DIV. OF OIL, GAS & MINING

UTAH REGISTERED
#154168
DAN W. GUY
1/26/09
PROFESSIONAL ENGINEER

SAVAGE

SAVAGE COAL TERMINAL
SURFACE & MINERAL OWNERSHIP

SCALE:	DRAWN BY:
1" = 1000'	BLACKHAWK ENGINEERING
DATE:	PLATE:
SEPTEMBER 2007	PLATE 1-1



MAPPING UNITS

BIBe – BILLINGS SILTY CLAY, 1% TO 3% SLOPES, ERODED
BIBm – BILLINGS SILTY CLAY, 1% TO 3% SLOPES, MOIST
ChC – CHIPETA SILTY CLAY, 3% TO 6% SLOPES
ChE2 – CHIPETA SILTY CLAY, 3% TO 20% SLOPES, ERODED
DL – DISTURBED LAND
KmB – KILLPACK SILT LOAM, 1% TO 3% SLOPES
KmBt – KILLPACK, HIGH WATER TABLE *, VARIANT, TAMARISK
KmBg – KILLPACK, HIGH WATER TABLE *, VARIANT, GREASEWOOD
So – SALTAIR SILTY CLAY LOAM, BARREN, 0% TO 3% SLOPES
Li – LIBBINGS *

* DRAINAGE HAS BEEN ALTERED BY CHANGES IN WATER SUPPLY. PRESENTLY DRIER THAN IN THE PAST.

LEGEND

SAMPLE POINT LOCATION:
SOIL BOUNDARY:
SALTY SPOTS LESS THAN 1.5 ACRES:
PERMIT BOUNDARY:
SOIL STRIPPING DEPTH: 12"

REVISIONS:

SAVAGE

SAVAGE COAL TERMINAL BASELINE SOILS MAP

DRAWN BY: BLACKHAWK ENGINEERING, INC.	SCALE: 1" = 300'
DATE: FEBRUARY 2009	PLATE NUMBER: 2-4

PERMIT BOUNDARY

1/4 CORNER

RELOCATED DIVERSION UD-1

N 438,500

N 438,000

N 437,500

N 437,000

N 436,500

AR-1 AR-2 AR-3 AR-4

PR-1 PR-2 PR-3 PR-4 PR-5 PR-6 PR-7 PR-8 PR-9 PR-10 PR-12 PR-13

SETTLING PONDS 1 2 3 4

POND 1 POND 2 POND 3 POND 4 POND 5

6" WATER LINE FROM RIVER PUMP

PUMP HOUSE

WATER TRUCK FILL

8" DRAIN LINE

6" WATER LINE

COAL PILE

CONVEYOR AND STACKING TUBE

14' DIA. PIPE TUNNEL

FAN HOUSE AND ESCAPE TUNNEL

CONVEYOR

TRUCK DUMP

REDISTATION

PREP. PLANT

MCC

SHOP

SAMPLER BUILDING

SAMPLE HOUSE

42" LONGUE CONVEYOR

COAL STORAGE AREA

SUB-SOIL

TOPSOIL

LIFTER

STOCKPILE AREA

MATERIAL STORAGE AREA

TOP SOIL

REFUSE AREA

UNDISTURBED

JENSEN TRUCKING

JENSEN PROPERTY (DELETED FROM PERMIT AREA)

GATE

PHONE BOX

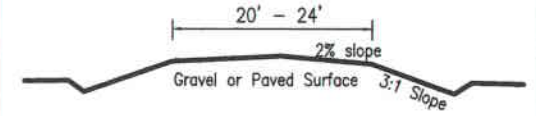
MAIN LINE TRACK

LOOP TRACK

1/4 CORNER

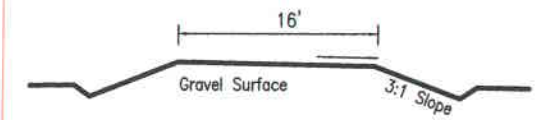
PERMIT BOUNDARY

TYPICAL CROSS SECTION
Haul Road



Ditch flow is parallel to the road centerline.

TYPICAL CROSS SECTION
Primary Access Road



Ditch flow is parallel to the road centerline.

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MAR 0 2 2009
DIV. OF OIL, GAS & MINING

UTAH REGISTERED
#154168
DAN, W. GUY
2/5/09
PROFESSIONAL ENGINEER

LEGEND:
- PERMIT BOUNDARY/BONDED AREA
- SURFACE DRAINAGE
- FENCE
- RAILROAD
- EXISTING UNDERGROUND DRAIN
- POWER POLE
- PRIMARY ROAD DESIGNATION PR-7
- ANCILLARY ROAD AR-1

CONTOUR INTERVAL: 2'

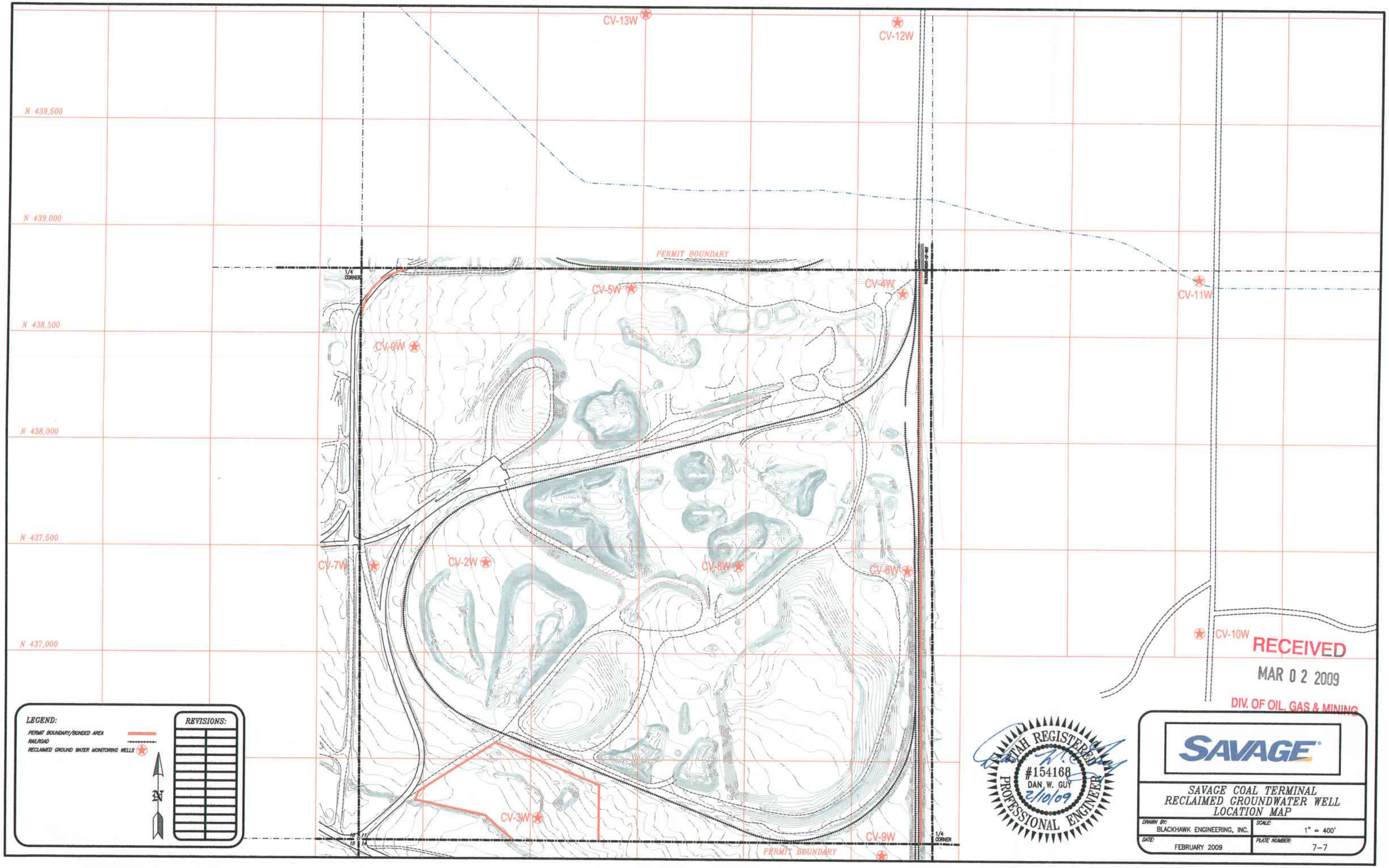
REVISIONS:

N

SAVAGE

SAVAGE COAL TERMINAL
ROAD MAP

SCALE:	DRAWN BY:
1" = 300'	BLACKHAWK ENGINEERING
DATE:	PLATE:
JULY 2006	PLATE 5-4



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MAR 0 2 2009
DIV. OF OIL, GAS & MINING

UTAH REGISTERED
#154168
DAN W. GUY
2/10/09
PROFESSIONAL ENGINEER

SAVAGE

SAVAGE COAL TERMINAL
RECLAIMED GROUNDWATER WELL
LOCATION MAP

DRAWN BY:	SCALE:
BLACKHAWK ENGINEERING, INC.	1" = 400'
DATE: FEBRUARY 2009	PLATE NUMBER: 7-7